

## EAST Search History

Ref. #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	598	lipson.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 13:43
L2	21	lipson.in. and hologra\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 13:50
L3	8	jp-61295076-\$.did. or jp-04134456-\$. did. or jp-04062554-\$.did. or jp-61192724-\$.did or jp-61076521-\$. did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 13:54
L4	2	jp-61192724-\$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:00
L5	0	"kawabata.in" and angebran\$6.xp.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:00
L6	0	"kawabata.in." and angebran\$6.xp.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:00
L7	3	kawabata.in. and angebran\$6.xp.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:01
L8	64	cationic\$6 adj5 polymer\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:01
L9	36333	cationic\$6 adj5 polymer\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:04

## EAST Search History

L10	52014	(metallic or azo or metalized or organometallic) near5 (dye or pigment)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:05
L11	2657	I9 and I10	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:05
L12	91	I9 same I10	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:12
L13	225274	(nlo or nonlinear or "non-linear" or "non linear")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:13
L14	1839	(photocur\$6 or photopolymer\$6 or photohard\$6 or monomer\$4) same I13	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:14
L15	318	(photocur\$6 or photopolymer\$6 or photohard\$6) same I13	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:14
L16	265	I15 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 14:15

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	us-20050233246-\$.did.	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 08:34
L2	0	kawabata.in. and angebr\$8.xp.	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 08:34
L3	3	kawabata.in. and angebr\$8.xp.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:34
L4	16628	(indigo or sudan or nitrostilbene or (nickel near5 quinoline))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:44
L5	21	l4 same hologra\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:41
L6	118	format adj2 hologra\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:41
L7	5	l6 same dye	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:41
L8	149	(indigo or sudan or nitrostilbene or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or acrylate)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:49
L9	223	(indigo or sudan or nitrostilbene or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or acrylate or photoresit or resist)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:49
L10	248	(indigo or sudan or nitrostilbene or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or acrylate or photoresist or resist)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:50

## EAST Search History

L11	430	(indigo or sudan or nitrostilbene or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or acrylate or photoresist or resist or epoxy or epoxide or cationically)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:51
L12	132	(indigo or sudan or nitrostilbene or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:59
L13	4	"5759721".pn. or "6221526".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:54
L14	493	"5759721".pn. or dhar.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:54
L15	23	"5759721".pn. or (dhar.in. and hologra\$6.ti,ab.)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 09:56
L16	124	"5759721".pn. or dhar.in.	USPAT	OR	ON	2007/06/11 09:57
L17	100	l12 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:00
L18	126	(indigo or sudan or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near5 quinoline)) same (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:08
L19	94	l18 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:10



## EAST Search History

L20	73	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) same (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:09
L21	204	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) and (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))).ab,ti,	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:09
L22	204	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) and (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))).ab,ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:21
L23	166	l21 not l18	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:10
L24	127	l23 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:15
L25	12	("sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) and (photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))).ab,ti.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:14
L26	57	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) same ((bound or pendant) same polymer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:18

## EAST Search History

L27	45	I26 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:42
L28	5	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) same ((bound or pendant) same monomer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:38
L29	604	(azo or azoic or nitrostilbene or quinoline) same ((bound or pendant) same polymer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:25
L30	181	(azo or azoic or nitrostilbene or quinoline) same ((bound or pendant) same monomer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:20
L31	410957	(photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:03
L32	204	I29 and I31	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:23
L33	77	I30 and I31	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:27
L34	64	(azo or azoic or nitrostilbene or quinoline) near15 ((bound or pendant) near5 polymer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:35
L35	66	(azo or azoic or nitrostilbene or quinoline) near20 ((bound or pendant) near5 polymer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:26

## EAST Search History

L36	8	(azo or azoic or nitrostilbene or quinoline) near20 ((bound or pendant) near5 monomer\$6)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:26
L37	32	I35 and I31	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:28
L38	3	I36 and I31	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:27
L39	1675	(azo or azoic or nitrostilbene or quinoline) near15 (cationic)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:36
L40	1694	(azo or azoic or nitrostilbene or quinoline) near15 (cationic\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:37
L41	5669	(photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or hardened or hardenable or hardening or curable or curing or resist or polymer\$6) same cationical\$6	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:03
L42	1027	(azo or azoic or nitrostilbene or quinoline) same (onium or sulphonium or sulfonium or iodonium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:44
L43	5	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) same (iodonium or onium or sulfonium or sulphonium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:38
L44	5	(indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline)) same (iodonium or onium or sulfonium or sulphonium or photoacid)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:00

## EAST Search History

L45	6107	(photoinitiat\$6 or initiat\$6) same (onium or sulphonium or sulfonium or iodonium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:41
L46	7649	(photoinitiat\$6 or initiat\$6 or photoacid) same (onium or sulphonium or sulfonium or iodonium)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:44
L47	578	I42 and I46	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:42
L48	6128	I46 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:42
L49	351	I47 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:44
L50	514	(photoinitiat\$6 or initiat\$6 or photoacid) same I42	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:44
L51	311	I50 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:45
L52	41700	(azo or azoic or nitrostilbene or quinoline) same (sensitiz\$6 or dye)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:17
L53	327	I52 and I47	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 10:45
L54	185	I53 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:12

## EAST Search History

L55	21723	(photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) same (filter or colored)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:00
L56	162125	(azo or azoic or nitrostilbene or quinoline or indigo or "sudan I" or ((hydroxy or methylamino or methacryloylethyl) adj5 nitrostilbene) or (nickel near10 quinoline))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:01
L57	190	I55 same I56	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:01
L58	10306	(photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or hardened or hardenable or hardening or curable or curing or resist or polymer\$6) same (nonlinear or "non linear" or nlo)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:03
L59	1640	(photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) same (nonlinear or "non linear" or nlo)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:03
L60	2575	(hologra\$6 or photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) same (nonlinear or "non linear" or nlo)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:04
L61	1119	(hologra\$6 or photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) near10 (nonlinear or "non linear" or nlo)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:04

## EAST Search History

L62	41	(hologra\$6 or photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) near10 ((nonlinear or "non linear" or nlo) near5 (dye or chromophore))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:05
L63	130	(hologra\$6 or photopolymer\$6 or photocur\$6 or photoinitiat\$6 or photoharden\$6 or photoresist or ((photo or light or uv or ultraviolet) near5 (hardened or hardenable or hardening or curable or curing or resist or polymer\$6))) near10 ((photochromic) near5 (dye or chromophore))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:12
L64	130	l63 not l62	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:12
L65	97	l64 and @ad<"20040416"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:13
L66	17	(azo or azoic or nitrostilbene or quinoline) and l65	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/06/11 11:17

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Welcome to STN International! Enter x:x

LOGINID:sssptal756mja

PASSWORD:

LOGINID/PASSWORD REJECTED

The loginid and/or password sent to STN were invalid.  
You either typed them incorrectly, or line noise may  
have corrupted them.

Do you wish to retry the logon?

Enter choice (y/N):

Do you wish to use the same loginid and password?

Enter choice (y/N):

Enter new loginid (or press [Enter] for sssptal756mja):

Enter new password:

LOGINID:

LOGINID:sssptal756mja

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	4	JAN 16	IPC version 2007.01 thesaurus available on STN
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NEWS	8	JAN 29	PHAR reloaded with new search and display fields
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NEWS	12	FEB 23	KOREAPAT enhanced with IPC 8 features and functionality
NEWS	13	FEB 26	MEDLINE reloaded with enhancements
NEWS	14	FEB 26	EMBASE enhanced with Clinical Trial Number field
NEWS	15	FEB 26	TOXCENTER enhanced with reloaded MEDLINE
NEWS	16	FEB 26	IFICDB/IFIPAT/IFIUDB reloaded with enhancements
NEWS	17	FEB 26	CAS Registry Number crossover limit increased from 10,000 to 300,000 in multiple databases
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NEWS	20	MAR 20	MARPAT now updated daily
NEWS	21	MAR 22	LWPI reloaded
NEWS	22	MAR 30	RDISCLOSURE reloaded with enhancements
NEWS	23	APR 02	JICST-EPLUS removed from database clusters and STN
NEWS	24	APR 30	GENBANK reloaded and enhanced with Genome Project ID field
NEWS	25	APR 30	CHEMCATS enhanced with 1.2 million new records
NEWS	26	APR 30	CA/CAPlus enhanced with 1870-1889 U.S. patent records
NEWS	27	APR 30	INPADOC replaced by INPADOCDB on STN
NEWS	28	MAY 01	New CAS web site launched
NEWS	29	MAY 08	CA/CAPlus Indian patent publication number format defined
NEWS	30	MAY 14	RDISCLOSURE on STN Easy enhanced with new search and display

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NEWS 32 MAY 21 TOXCENTER enhanced with BIOSIS reload

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> tra rn l1

L2 TRANSFER L1 1- RN : 18 TERMS

L3 18 L2

=> s (indigo or sudan or nickel) and l3

634 INDIGO

47 INDIGOS

634 INDIGO

(INDIGO OR INDIGOS)

544 SUDAN

344557 NICKEL

L4 1 (INDIGO OR SUDAN OR NICKEL) AND L3

=> d kwic

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN

RN 9011-14-7 REGISTRY

OTHER NAMES:

CN Methyl methacrylate-nickel graft polymer

=> s (indigo or sudan or quinoline

UNMATCHED LEFT PARENTHESIS '(INDIGO'

The number of right parentheses in a query must be equal to the number of left parentheses.

=> s (indigo or sudan or quinoline) and l3

634 INDIGO

47 INDIGOS

634 INDIGO

(INDIGO OR INDIGOS)

544 SUDAN

382782 QUINOLINE

1 QUINOLINES  
382782 QUINOLINE  
(QUINOLINE OR QUINOLINES)

L5 0 (INDIGO OR SUDAN OR QUINOLINE) AND L3

=> s indico

L6 3 INDICO

=> s indigo

634 INDIGO

47 INDIGOS

L7 634 INDIGO

(INDIGO OR INDIGOS)

=> d kwic 1

L7 ANSWER 1 OF 634 REGISTRY COPYRIGHT 2007 ACS on STN

CN Synthase, indigoidine (Streptomyces lavendulae subsp. lavendulae gene  
bpsA) (CA INDEX NAME)

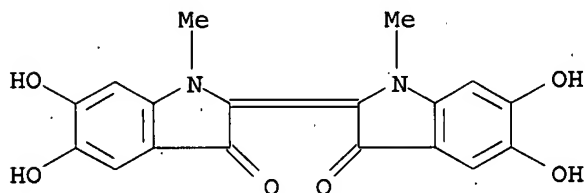
=> d scan 1

'1' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

L7 634 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN

IN Indigotin, 5,5',6,6'-tetrahydroxy-1,1'-dimethyl- (5CI)

MF C18 H14 N2 O6



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN  
  
CALC - Table of calculated properties  
EPROP - Table of experimental properties  
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats

must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL  
  
IABS -- ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

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HELP DFIELDS -- To see a complete list of individual display fields.  
HELP FORMATS -- To see detailed descriptions of the predefined formats.  
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

```
=> s indigotin or (sudan(3w)I) or diethyleaminophenylimino(5a)quinoline
      150 INDIGOTIN
      544 SUDAN
559508 I
      1 SUDAN(3W)I
      0 DIETHYLEAMINOPHENYLIMINO
382782 QUINOLINE
      1 QUINOLINES
382782 QUINOLINE
      (QUINOLINE OR QUINOLINES)
      0 DIETHYLEAMINOPHENYLIMINO(5A)QUINOLINE
L8      151 INDIGOTIN OR (SUDAN(3W)I) OR DIETHYLEAMINOPHENYLIMINO(5A)QUINOLI
      NE
```

```
=> s indigotin or (sudan(3w)I) or diethylaminophenylimino(5a)quinoline
      150 INDIGOTIN
      544 SUDAN
559508 I
      1 SUDAN(3W)I
      297 DIETHYLAMINOPHENYLIMINO
382782 QUINOLINE
      1 QUINOLINES
382782 QUINOLINE
      (QUINOLINE OR QUINOLINES)
      1 DIETHYLAMINOPHENYLIMINO(5A)QUINOLINE
L9      152 INDIGOTIN OR (SUDAN(3W)I) OR DIETHYLAMINOPHENYLIMINO(5A)QUINOLIN
      E
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```
=> s (sudan(3w)I) or diethylaminophenylimino(5a)quinoline
      544 SUDAN
```

559508 I

1 SUDAN(3W) I

297 DIETHYLAMINOPHENYLIMINO

382782 QUINOLINE

1 QUINOLINES

382782 QUINOLINE

(QUINOLINE OR QUINOLINES)

1 DIETHYLAMINOPHENYLIMINO (5A) QUINOLINE

L10 2 (SUDAN(3W) I) OR DIETHYLAMINOPHENYLIMINO (5A) QUINOLINE

=> s indigotin

L11 150 INDIGOTIN

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

120.45

135.26

FILE 'CAPLUS' ENTERED AT 11:28:25 ON 11 JUN 2007

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FILE COVERS 1907 - 11 Jun 2007 VOL 146 ISS 25

FILE LAST UPDATED: 10 Jun 2007 (20070610/ED)

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<http://www.cas.org/infopolicy.html>

=> s l10 and (photopolymer? or hologra?)

868 L10

16985 PHOTOPOLYMER?

22213 PHOTOPOLYMN

329 PHOTOPOLYMNS

22302 PHOTOPOLYMN

(PHOTOPOLYMN OR PHOTOPOLYMNS)

1484 PHOTOPOLYMD

1141 PHOTOPOLYMG

32050 PHOTOPOLYMER?

(PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)

20572 HOLOGRA?

18118 HOLOG

14 HOLOGS

18119 HOLOG

(HOLOG OR HOLOGS)

23988 HOLOGRA?

(HOLOGRA? OR HOLOG)

L12 4 L10 AND (PHOTOPOLYMER? OR HOLOGRA?)

=> d all 1-4

L12 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:144169 CAPLUS  
 DN 144:222682  
 ED Entered STN: 16 Feb 2006  
 TI Dye-containing curable resin composition containing naphthalocyanine compound, color filter, and its manufacture  
 IN Takakuwa, Hideki; Kojima, Tetsuro  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 53 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 38, 41

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006047677	A	20060216	JP 2004-228365	20040804
JP 2004-228365		20040804		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006047677	IPCI	G03F0007-004 [I,A]; C08F0002-50 [I,A]; C08F0002-46 [I,C*]; G02B0005-20 [I,A]
	FTERM	2H025/AA11; 2H025/AB13; 2H025/AC01; 2H025/AD01; 2H025/AD03; 2H025/BC32; 2H025/BC42; 2H025/BE00; 2H025/BE01; 2H025/BG00; 2H025/CA01; 2H025/CA14; 2H025/CA28; 2H025/CB13; 2H025/CB14; 2H025/CC01; 2H025/CC13; 2H025/FA03; 2H025/FA12; 2H025/FA17; 2H048/BA02; 2H048/BA45; 2H048/BA47; 2H048/BA48; 2H048/BB02; 2H048/BB42; 4J011/PA53; 4J011/PA64; 4J011/PA67; 4J011/PA69; 4J011/PA70; 4J011/PA85; 4J011/PA90; 4J011/QA22; 4J011/SA78; 4J011/SA83; 4J011/SA85; 4J011/SA88; 4J011/TA01; 4J011/TA04; 4J011/TA08; 4J011/UA01; 4J011/UA09; 4J011/VA01; 4J011/WA01

OS MARPAT 144:222682

AB The composition contains (A) an alkali-soluble binder, (B) a dye solution in organic solvent at 30-70 weight%, (C) a radiation-sensitive compound, and (D) naphthalocyanine compound 0.05-10 weight% (A + B + C + D = 100). The color filter is manufactured by coating the composition on a support, exposing it through a mask, and developing. The filter shows good alkali developability and lightfastness even after heat treatment.

ST color filter curable resin dye naphthalocyanine

IT Anthraquinone dyes

Azo dyes

Optical filters

(dye-containing curable resin composition containing naphthalocyanine compound for color filter)

IT 66003-78-9, Triphenylsulfonium trifluoromethanesulfonate

RL: CAT (Catalyst use); USES (Uses)

(acid generator; dye-containing curable resin composition containing naphthalocyanine compound for color filter)

IT 65697-21-4, Benzyl methacrylate-methacrylic acid copolymer 141655-30-3, Benzyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid copolymer 280566-53-2

RL: TEM (Technical or engineered material use); USES (Uses)

(binder; dye-containing curable resin composition containing naphthalocyanine compound for color filter)

IT 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer

RL: IMF (Industrial manufacture); TEM (Technical or engineered material)

use); PREP (Preparation); USES (Uses)  
(dye-containing curable resin composition containing naphthalocyanine  
compound for  
color filter)

IT 26603-11-2 58687-99-3 82089-93-8 92396-88-8 99537-10-7  
105528-25-4 115501-73-0 132663-91-3 137067-34-6 137818-54-3  
153454-01-4 153454-02-5 155773-70-9 184424-41-7 875913-48-7  
875913-49-8 875913-50-1

RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)

(dye-containing curable resin composition containing naphthalocyanine  
compound for  
color filter)

IT 842-07-9, C.I. Solvent Yellow 14 3861-73-2, C.I. Solvent Blue 37  
6359-88-2, C.I. Acid Yellow 76 6359-91-7, C.I. Acid Yellow 29  
6375-55-9 6408-90-8, C.I. Acid Yellow 65 6416-66-6, C.I. Acid Red 249  
10169-02-5, C.I. Acid Red 97 11140-80-0, C.I. Acid Red 143 12217-34-4,  
C.I. Acid Red 57 463297-94-1, C.I. Solvent Orange 26 618447-63-5, Vali  
Fast Blue 2620 852636-03-4

RL: TEM (Technical or engineered material use); USES (Uses)

(dye-containing curable resin composition containing naphthalocyanine  
compound for  
color filter)

IT 253585-83-0, CGI 124

RL: CAT (Catalyst use); USES (Uses)

(photopolymn. initiator; dye-containing curable resin composition  
containing naphthalocyanine compound for color filter)

IT 126879-86-5

RL: CAT (Catalyst use); USES (Uses)

(photosensitive compound; dye-containing curable resin composition  
containing  
naphthalocyanine compound for color filter)

L12 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:80987 CAPLUS

DN 140:130469

ED Entered STN: 01 Feb 2004

TI Novel methods and compositions for improved electrophoretic display  
performance

IN Wu, Zarng-arh George; Haubrich, Jeanne E.; Wang, Xiaojia; Liang,  
Rong-chang

PA Sipix Imaging, Inc., USA

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G02F001-00

CC 48-7 (Unit Operations and Processes)

Section cross-reference(s): 29, 35, 38, 74, 76

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004010206	A2	20040129	WO 2003-US21681	20030710
WO 2004010206	A3	20040408		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CN 1469177	A	20040121	CN 2002-153622	20021127

AU 2003249041	A1	20040209	AU 2003-249041	20030710
EP 1529242	A2	20050511	EP 2003-765534	20030710
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005533289	T	20051104	JP 2004-523103	20030710
PRAI US 2002-396680P	P	20020717		
WO 2003-US21681	W	20030710		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004010206	ICM	G02F001-00
	IPCI	G02F0001-00 [ICM,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
CN 1469177	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]; G09F0009-37 [ICS,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
AU 2003249041	IPCI	G02F0001-00 [ICM,7]
EP 1529242	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
JP 2005533289	IPCI	G02F0001-167 [ICM,7]; G02F0001-17 [ICS,7]; G02F0001-01 [ICS,7,C*]

AB The invention is directed to novel methods and compns. useful for improving the performance of electrophoretic displays. The methods comprise adding a high absorbance dye or pigment, or conductive particles or a charge transport material into an electrode protecting layer of the display.

ST electrophoretic display dye pigment conducting particle polymer sealant adhesive; electrophotog photoconductor photoreceptor coated electrode metal complex oxide organometallic

IT Oxidation potential  
( $<1.4$  V (vs. SCE) for hole transport materials; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoalkanes  
RL: NUU (Other use, unclassified); USES (Uses)  
(C7-10; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Cyanine dyes  
(Naphthalo, metal complexes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT UV absorption  
(UV-visible, of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbon black, processes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(Vulcan XC-72, composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(acrylates, Ebecryl 1360; dyes, pigments, crosslinking sealants and

adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, uses  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (acrylates, microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ketones, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (alkadienyl; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitriles, uses  
 Nitro compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (and oligomers and polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Amines, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (aromatic; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoprene-styrene rubber  
 Polymers, uses  
 Styrene-butadiene rubber, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Synthetic rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (butadiene-isoprene-styrene, hydrogenated, block, composite sealant with Kraton G 1650 and Carb-O-Sil or carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (cobalt; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Acrylic polymers, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (cyano-containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isocyanates  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (di- and poly- monomers, polymers containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Adhesives  
 Coating materials  
 Crosslinking



Dyes  
 Electric conductors  
 Electrodes  
 Electrophotographic apparatus  
 Electrophotographic photoconductors (photoreceptors)  
 Embossing  
 Lamination  
 Pigments, nonbiological  
 Sealing compositions  
     (dyes, pigments, crosslinking sealants and adhesives, and conducting  
     polymer components and novel methods and compns. for improved  
     electrophoretic display performance)

IT Thermoplastic rubber  
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
     (dyes, pigments, crosslinking sealants and adhesives, and conducting  
     polymer components and novel methods and compns. for improved  
     electrophoretic display performance)

IT Alkadienes  
 Enamines  
 Epoxy resins, uses  
 Hydrazones  
 Metals, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material  
 use); USES (Uses)  
     (dyes, pigments, crosslinking sealants and adhesives, and conducting  
     polymer components and novel methods and compns. for improved  
     electrophoretic display performance)

IT Diazo compounds  
 Metallophthalocyanines  
 Metalloporphyrins  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PYP (Physical process); PROC (Process); USES (Uses)  
     (dyes, pigments, crosslinking sealants and adhesives, and  
     conducting polymer components and novel methods and compns. for  
     improved electrophoretic display performance)

IT Oxides (inorganic), uses  
 RL: DEV (Device component use); TEM (Technical or engineered material  
 use); USES (Uses)  
     (elec. conductive; dyes, pigments, crosslinking sealants and adhesives,  
     and conducting polymer components and novel methods and compns. for  
     improved electrophoretic display performance)

IT Carbonaceous materials (technological products)  
 RL: DEV (Device component use); TEM (Technical or engineered material  
 use); USES (Uses)  
     (elec. conductor; dyes, pigments, crosslinking sealants and adhesives,  
     and conducting polymer components and novel methods and compns. for  
     improved electrophoretic display performance)

IT Optical imaging devices  
     (electrophoretic; dyes, pigments, crosslinking sealants and adhesives,  
     and conducting polymer components and novel methods and compns. for  
     improved electrophoretic display performance)

IT Polyurethanes, uses  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP  
 (Preparation); USES (Uses)  
     (encapsulated TiO<sub>2</sub>; dyes, pigments, crosslinking sealants and  
     adhesives, and conducting polymer components and novel methods and  
     compns. for improved electrophoretic display performance)

IT Polyesters, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PYP (Physical process); TEM (Technical or engineered material  
 use); PROC (Process); USES (Uses)  
     (film coated with ITO; dyes, pigments, crosslinking sealants and  
     adhesives, and conducting polymer components and novel methods and  
     compns. for improved electrophoretic display performance)

IT Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (hydrogenated, block, triblock, Kraton G 1650, composite with Kraton G-R 6919/Carb-O-Sil or Carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Engineering  
 (inventions; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
 (mono- and multifunctional oligomers and polymers containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Azo dyes  
 (monoazo, diazo, and polyazo; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Allylic compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (multifunctional monomers, polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (nickel, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Heterocyclic compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (nitrogen, five-membered, triazoles; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alloys, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (nonferrous; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT IR absorption  
 (of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Electrophoresis apparatus  
 (optical imaging; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polymerization  
 (photopolymn.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Transition metal complexes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (phthalocyanine, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vinyl compounds, uses

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(polymers, from multifunctional monomers; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vanadyl complexes

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(porphyrin, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(thermoplastics; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides

Polyamides, reactions

Polycarbonates, reactions

Polyesters, reactions

Polyethers, reactions

Polyurethanes, reactions

Polyvinyl butyrals

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses

RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(thermosetting; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metallophthalocyanines

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(transition metal complexes, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(vanadyl, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitrile rubber, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(vinyl, polymers, oligomers and polymers containing, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(vinyl, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components)

and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9, Ebecryl 600  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (Bisphenol A-containing diacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13048-33-4, 1,6-Hexanediol diacrylate  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (HDODA; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 75081-21-9, ITX  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (ITX; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 50926-11-9, Indium tin oxide  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (PET film coated with; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 60506-81-2, SR 399  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (a tetraacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 41484-35-9, Irganox 1035  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (bis (hindered phenol thioether); dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 138184-94-8, Cab-O-Sil TS 720  
 RL: TEM (Technical or engineered material use); USES (Uses) (composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 65181-78-4, N,N'-Bis(3-methylphenyl)-N,N'-diphenylbenzidine  
 RL: DEV (Device component use); USES (Uses) (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12227-55-3, Orasol Red BL 12237-23-9, Orasol Black CN 61931-55-3, Orasol Yellow 2GLN  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 56996-93-1, Sudan Black 61901-87-9, Orasol Black RLI 71799-11-6, Orasol Blue GL  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 14916-87-1, FC 3275  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (dye; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 77-58-7, Dibutyltin dilaurate  
 RL: CAT (Catalyst use); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 78-93-3, Methyl ethyl ketone, uses  
 RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 147-14-8D, Copper phthalocyanine, derivs. 7429-90-5D, Aluminum, phthalocyanine or naphthalocyanine complexes 7439-89-6D, Iron, phthalocyanine or naphthalocyanine complexes 7439-92-1D, Lead, phthalocyanine or naphthalocyanine complexes 7439-95-4, Magnesium, processes 7440-02-0D, Nickel, naphthalocyanine derivs. complexes 7440-31-5D, Tin, phthalocyanine or naphthalocyanine complexes 7440-32-6D, Titanium, naphthalocyanine derivs. complexes 7440-43-9D, Cadmium, phthalocyanine or naphthalocyanine complexes 7440-48-4D, Cobalt, naphthalocyanine derivs. complexes 7440-62-2D, Vanadium, phthalocyanine or naphthalocyanine complexes 7440-66-6D, Zinc, phthalocyanine or naphthalocyanine complexes 7440-74-6D, Indium, phthalocyanine or naphthalocyanine complexes 78675-98-6D, Squaraine, derivs.  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-42-3, Poly(ethyl methacrylate)  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 74-82-8D, Methane, triaryl derivs. 81-33-4 85-83-6, Sudan IV 85-86-9, Sudan III 86-74-8D, Carbazole, derivs. 92-52-4D, Biphenyl, derivs. 129-79-3, 2,4,7-Trinitro-9-fluorenone 288-42-6D, Oxazole, derivs. 288-99-3D, 1,3,4-Oxadiazole, 2,5-bis(4-N,N'-dialkylaminophenyl) 486-25-9, Fluorenone 486-25-9D, Fluorenone, oligomers and polymers of 809-73-4 842-07-9, Sudan yellow 966-88-1D, Benzaldehyde-N,N-diphenylhydrazine, p-dialkylamino derivs. 1159-53-1 1229-55-6, Sudan R 1450-63-1, 1,1,4,4-Tetraphenylbutadiene 1484-96-4 1518-16-7 2085-33-8 2417-00-7 2455-14-3 2491-91-0, 2,5-Bis(4-methylphenyl)-1,3,4-oxadiazole 3118-97-6, Sudan II 4197-25-5, Sudan Black B 5152-94-3 7429-90-5, Aluminum, uses 7429-90-5D, Aluminum, alloys 7439-89-6, Iron, uses 7439-89-6D, Iron, alloys 7440-02-0D, Nickel, alloys 7440-22-4, Silver, uses 7440-22-4D, Silver, alloys 7440-50-8, Copper, uses 7440-50-8D, Copper, alloys 7440-57-5, Gold, uses 7440-57-5D, Gold, alloys 7440-74-6, Indium, uses 7440-74-6D, Indium, alloys 7782-42-5, Graphite, uses 9003-39-8, Polyvinylpyrrolidone 9003-55-8, Styrene-butadiene copolymer 11120-54-0D, Oxadiazole, derivs. 12673-86-8, Antimony tin oxide 14705-63-6 14705-63-6D, alkylated and alkoxylated derivs. 14752-00-2 15546-43-7, N,N,N',N'-Tetraphenylbenzidine 20441-06-9 23467-27-8 24937-78-8, Ethylene-vinyl acetate copolymer 26009-24-5, Poly(p-phenylene vinylene) 33200-26-9 35079-58-4 35458-94-7 36118-45-3D, Pyrazoline, Ph dialkylaminostyrene dialkylaminophenyl derivs.

36118-45-3D, Pyrazoline, derivs. 41584-66-1 43134-09-4 51325-95-2  
 58280-31-2 58328-31-7, 4,4'-Bis(carbazol-9-yl)biphenyl 58473-78-2  
 59765-31-0 59869-79-3 69361-50-8D, bis(4-N,N-dialkylamino)  
 75232-44-9 76185-65-4 82532-76-1 83992-95-4 85171-94-4  
 89114-90-9 89114-91-0 89991-16-2 93376-18-2, (4-Butoxycarbonyl-9-fluorenylidene)malononitrile 93975-08-7 93975-09-8 94665-89-1  
 95270-88-5, Polyfluorene 95993-52-5 96492-45-4 97671-90-4  
 103079-11-4 105389-36-4, 4,4',4''-Tris(N,N-diphenylamino)triphenylamine  
 117944-65-7, Indium zinc oxide 123847-85-8 126213-51-2,  
 Poly(3,4,-ethylenedioxythiophene) 127022-77-9,  
 Hexakis(benzylthio)benzene 138171-14-9 138372-67-5 139092-78-7  
 139255-17-7 141752-82-1 142289-08-5 150405-69-9 154896-84-1  
 164534-25-2 174493-15-3 182507-83-1 184101-39-1 185690-39-5,  
 4,4',4''-Tris[N-(1-naphthyl)-N-phenylamino]triphenylamine 203799-76-2  
 254435-83-1, Sudan Blue 376386-75-3 482654-95-5 649735-34-2  
 649735-35-3 649735-37-5D, 2,5-bis(4-dialkylaminophenyl) derivs.  
 649735-38-6 650609-45-3 650609-46-4 650609-47-5 650609-48-6  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 68-12-2, Dimethylformamide, uses 108-21-4, Isopropyl acetate 108-88-3, Toluene, uses 110-54-3, Hexane, uses 141-78-6, Ethyl acetate, uses  
 RL: NUU (Other use, unclassified); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 650634-86-9, Duro-Tak 1105  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 6712-98-7 15625-89-5, Trimethylolpropane triacrylate 165169-07-3, Desmodur N 3400 601484-87-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 198-55-0, Perylene 488-86-8D, Croconic acid, amine derivs. 3317-67-7, Cobalt phthalocyanine 12226-78-7, C.I.Solvent Blue 67 14055-02-8D, Nickel phthalocyanine, derivs. 14172-92-0, Nickel tetraphenylporphine 33273-09-5D, derivs. 52324-93-3, Titanium phthalocyanine

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 650609-44-2P

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)

(electrophoretic TiO2 encapsulant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13463-67-7, R900, uses

RL: DEV (Device component use); USES (Uses)

(encapsulated with electrophoretic polymer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 25038-59-9, PET, processes

RL: DEV (Device component use); PEP (Physical, engineering or chemical

process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(film coated with ITO; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 119313-12-1, Irgacure 369  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(initiator; dyes, pigments, crosslinking sealants and adhesives; and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 105729-79-1 700836-36-8  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(isoprene-styrene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 7440-02-0, Nickel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(microcup base template; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9DP, Ebecryl 600, polymers containing 13048-33-4DP, HDDA, polymers containing 15625-89-5DP, TMPTA, polymers containing 60506-81-2DP, SR 399, polymers containing  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-18-3  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(nitrile rubber, vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12047-27-7, K-Plus 16, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(pigment, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 115452-84-1, Disperbyk 163  
RL: MOA (Modifier or additive use); USES (Uses)  
(polymeric dispersant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 649735-33-1P  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(primer coating for ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 106107-54-4 694491-73-1  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 53568-48-2, Disperse-Ayd 6  
RL: MOA (Modifier or additive use); USES (Uses)  
(surfactant; dyes, pigments, crosslinking sealants and adhesives, and

conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 79-10-7D, Acrylic acid, multifunctional and multi- esters, oligomers and polymers containing 79-10-7D, Acrylic acid, multifunctional esters 79-41-4D, Methacrylic acid, multifunctional and multi- esters, oligomers and polymers containing 79-41-4D, Methacrylic acid, multifunctional esters 100-42-5D, Styrene, derivs. 100-42-5D, Styrene, oligomers and polymers containing 9003-01-4D, Polyacrylic acid, alkyl esters 9004-36-8, Cellulose acetate butyrate 25087-26-7D, Polymethacrylic acid, alkyl esters

RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 477290-74-7, Galden HT 200

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(tri-hydric amino alc.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

L12 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1985:445823 CAPLUS

DN 103:45823

ED Entered STN: 10 Aug 1985

TI Radiation-sensitive compounds

IN Wade, John Robert

PA Vickers PLC, UK

SO Eur. Pat. Appl., 27 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03F007-10

ICS G03C001-72; C07D277-60; C07D293-12; C07D209-12; C07D215-14

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

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PI	EP 135348	A2	19850327	EP 1984-305425	19840809
	EP 135348	A3	19860611		
	EP 135348	B1	19890215		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	FI 8403106	A	19850213	FI 1984-3106	19840807
	FI 72823	B	19870331		
	FI 72823	C	19870710		
	AU 8431706	A	19850214	AU 1984-31706	19840808
	AU 584308.	B2	19890525		
	ZA 8406152	A	19850327	ZA 1984-6152	19840808
	AT 40848	T	19890315	AT 1984-305425	19840809
	DK 8403864	A	19850213	DK 1984-3864	19840810
	NO 8403221	A	19850213	NO 1984-3221	19840810
	NO 169897	B	19920511		
	NO 169897	C	19920819		
	ES 535053	A1	19860601	ES 1984-535053	19840810
	CA 1335595	C	19950516	CA 1984-460817	19840810
	US 5141841	A	19920825	US 1989-395218	19890817
	US 5519136	A	19960521	US 1992-886858	19920522
PRAI	GB 1983-21813	A	19830812		
	EP 1984-305425	A	19840809		
	US 1984-639908	B1	19840810		
	US 1986-936988	B1	19861202		
	US 1987-111141	B1	19871016		
	US 1988-275699	B1	19881123		
	US 1989-395218	A3	19890817		



## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 135348	ICM	G03F007-10
	ICS	G03C001-72; C07D277-60; C07D293-12; C07D209-12; C07D215-14
	IPCI	G03F0007-10 [ICM,4]; G03C0001-72 [ICS,4]; C07D0277-60 [ICS,4]; C07D0277-00 [ICS,4,C*]; C07D0293-12 [ICS,4]; C07D0293-00 [ICS,4,C*]; C07D0209-12 [ICS,4]; C07D0209-00 [ICS,4,C*]; C07D0215-14 [ICS,4]; C07D0215-00 [ICS,4,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
FI 8403106	IPCI	G03F [ICM,4]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
AU 8431706	IPCI	C07D0209-12 [ICM,3]; C07D0209-00 [ICM,3,C*]; C07D0215-14 [ICS,3]; C07D0215-00 [ICS,3,C*]; C07D0277-60 [ICS,3]; C07D0277-00 [ICS,3,C*]; C07D0293-12 [ICS,3]; C07D0293-00 [ICS,3,C*]; C07D0409-06 [ICS,3]; C07D0409-00 [ICS,3,C*]; C07D0417-06 [ICS,3]; C07D0417-00 [ICS,3,C*]; G03F0007-10 [ICS,3]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
ZA 8406152	IPCI	B41N [ICM,4]; C07C [ICS,4]; G03C [ICS,4]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
AT 40848	IPCI	G03F0007-10 [ICM,4]; G03C0001-72 [ICS,4]; C07D0277-60 [ICS,4]; C07D0277-00 [ICS,4,C*]; C07D0293-12 [ICS,4]; C07D0293-00 [ICS,4,C*]; C07D0209-12 [ICS,4]; C07D0209-00 [ICS,4,C*]; C07D0215-14 [ICS,4]; C07D0215-00 [ICS,4,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-60 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; G03C0001-72 [I,A]; G03C0001-72 [I,C*]
DK 8403864	IPCI	C07D [ICM,4]; B41N [ICS,4]; G03C [ICS,4]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]

NO 8403221	IPCI	C07D [ICM,4]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
ES 535053	IPCI	B41N0001-14 [ICM,4]; B41N0001-12 [ICM,4,C*]
CA 1335595	IPCI	C09B0023-16 [ICM,6]; C09B0023-00 [ICM,6,C*]; G03C0001-12 [ICS,6]; G03F0007-028 [ICS,6]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
US 5141841	IPCI	G03F0007-028 [ICM,5]; G03F0007-039 [ICS,5]; G03C0001-675 [ICS,5]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	NCL	430/281.000; 430/191.000; 430/270.100; 430/343.000; 430/344.000; 430/916.000; 430/920.000; 430/923.000; 430/924.000; 430/925.000; 430/926.000; 522/034.000; 522/045.000; 522/052.000
US 5519136	IPCI	C07D0215-12 [ICM,6]; C07D0215-00 [ICM,6,C*]; C07D0209-12 [ICS,6]; C07D0209-00 [ICS,6,C*]; C07D0277-64 [ICS,6]; C07D0277-84 [ICS,6]; C07D0277-00 [ICS,6,C*]
	IPCR	C07D0209-00 [I,C*]; C07D0209-12 [I,A]; C07D0215-00 [I,C*]; C07D0215-14 [I,A]; C07D0277-00 [I,C*]; C07D0277-64 [I,A]; C07D0277-84 [I,A]; C07D0293-00 [I,C*]; C07D0293-12 [I,A]; C07D0409-00 [I,C*]; C07D0409-06 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; G03C0001-675 [I,A]; G03C0001-675 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	NCL	546/174.000; 548/121.000; 548/150.000; 548/152.000; 548/170.000; 548/194.000; 548/465.000; 548/492.000; 548/494.000

OS MARPAT 103:45823

GI For diagram(s), see printed CA Issue.

AB A radiation-sensitive composition useful for preparation of lithog. plates, photoresists, or photoimaging systems contains a compound I (A = 5- or 6-membered heterocyclic ring which can be fused to an aromatic nucleus; R = alkyl; R1 = H, acyl, aryl, heterocyclylcarbonyl, II; R2, R3 = H, CHpX3-p; A1, A2 = aryl, heterocyclyl; X = Cl, Br; m, n, p = 0, 1, 2), which acts as a free radical generator or as an acid-releasing agent. Thus, an electrolytically grained and anodized Al support was coated with a solution containing dimethacrylate ester of glycidyl ether of Bisphenol A 3, vinyl acetate-crotonic acid copolymer 1, III 0.15 weight part, and EtCOMe at coating weight of 1 g/m<sup>2</sup>, dried, overcoated with poly(vinyl alc.), imagewise UV-exposed, and developed with an aqueous mixture of Na propanoate, Na benzoate,

and a surfactant to give a lithog. plate.

ST photoimaging lithog plate photoresist compn; benzothiazoline deriv photosensitive photoimaging compn; benzoselenazoline deriv photosensitive photoimaging compn; benzoxazoline deriv photosensitive photoimaging compn; naphthothiazoline deriv photosensitive photoimaging compn; naphthoselenazoline deriv photosensitive photoimaging compn;

naphthoxazoline deriv photosensitive photoimaging compn

IT Lithographic plates  
(photoimaging compns. containing photosensitive heterocyclic compds. for, as free-radical generators and acid-releasing agents)

IT Photoimaging compositions and processes  
(photopolymeric, photosensitive heterocyclic compds. for, as free radical-generators or acid-releasing agents)

IT Heterocyclic compounds  
RL: USES (Uses)  
(photosensitive, as free radical-generators or acid-releasing agents in photoimaging compns.)

IT Resists  
(photo-, photosensitive heterocyclic compds. for, as free-radical regenerators and acid-releasing agents)

IT 115-39-9 121-44-8, uses and miscellaneous 129-73-7 842-07-9  
1484-13-5 1552-42-7 9003-08-1 23358-99-8 25068-38-6 50986-48-6D, esters 80638-50-2 83589-48-4  
RL: USES (Uses)  
(photoimaging composition containing, photosensitive heterocyclic free radical-generators or acid-releasing agents for)

IT 25609-89-6  
RL: USES (Uses)  
(photoimaging composition containing, photosensitive heterocyclic free-radical generators or acid-releasing agents for)

IT 97189-84-9 97189-85-0 97189-86-1 97189-87-2 97189-88-3  
97189-89-4 97189-90-7 97189-91-8 97189-92-9 97189-93-0  
97189-94-1 97189-95-2 97189-96-3 97189-97-4 97189-98-5  
97189-99-6 97190-00-6 97190-01-7 97190-02-8  
RL: USES (Uses)  
(photoimaging composition for lithog. plate fabrication containing)

IT 97189-81-6P 97189-82-7P 97189-83-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation and application of, in photoimaging compns. for lithog. plate fabrication)

IT 14815-86-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with benzotriazolinium and indoline derivs.)

IT 2654-52-6 66113-37-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with trichloromethylbenzoyl chloride)

L12 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1975:24376 CAPLUS

DN 82:24376

ED Entered STN: 12 May 1984

TI Developer for treating a suitable exposed image, with a negative-working photopolymer presensitized plate

IN Lawson, Leslie E.

PA Vickers Ltd.

SO Ger. Offen., 26 pp.  
CODEN: GWXXBX

DT Patent

LA German

IC G03C

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2407089	A1	19740905	DE 1974-2407089	19740214
	ZA 7400786	A	19741224	ZA 1974-786	19740206
	BE 810926	A1	19740529	BE 1974-140828	19740212
	NL 7401885	A	19740816	NL 1974-1885	19740212
	FR 2217722	A1	19740906	FR 1974-4997	19740214
	JP 49111703	A	19741024	JP 1974-17216	19740214

IT 1002926	B	19760520	IT 1974-48354	19740214
PRAI GB 1973-7372	A	19730214		
GB 1973-26882	A	19730605		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2407089	IC	G03C
	IPCI	G03C0005-24
	IPCR	G03F0007-42 [I,C*]; G03F0007-42 [I,A]; B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-30 [I,C*]; G03F0007-30 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
ZA 7400786	IPCI	G03D
	IPCR	B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
BE 810926	IPCI	G03C
	IPCR	B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
NL 7401885	IPCI	G03F0007-02
	IPCR	G03F0007-42 [I,C*]; G03F0007-42 [I,A]; B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-30 [I,C*]; G03F0007-30 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
FR 2217722	IPCI	G03C0005-24; G03F0007-00 [ICA]
	IPCR	G03F0007-42 [I,C*]; G03F0007-42 [I,A]; B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-30 [I,C*]; G03F0007-30 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
JP 49111703	IPCI	G03F0007-02; G03F0007-02
	IPCR	G03F0007-42 [I,C*]; G03F0007-42 [I,A]; B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-30 [I,C*]; G03F0007-30 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]
IT 1002926	IPCI	G03D
	IPCR	G03F0007-42 [I,C*]; G03F0007-42 [I,A]; B41N0003-00 [I,C*]; B41N0003-08 [I,A]; G03F0007-30 [I,C*]; G03F0007-30 [I,A]; G03F0007-32 [I,C*]; G03F0007-32 [I,A]

AB Neg. working plates, such as those presensitized according to Brit. 1,168,445 (CA 70: 120042g), are developed with  $\gamma$ -butyrolactone,  $\epsilon$ -caprolactam, tetrahydrofurfuryl alc. or acetate, 3-methoxybutyl or 2-methoxyethyl acetate as solvent for the unexposed polymer. The developer contains as water-insol. dye Oil Orange E, Oil Red 153038, Waxoline Yellow or Blue AS, having a high affinity for printers ink. Excess developer is wiped off between rubber-coated squeegee rollers, and then the plates are roller-coated with an aqueous desensitizer bath containing <10% of a surfactant to hold developer impurities, which would cause scumming, in suspension. Thus, an A1 plate sensitized with KPR poly(vinyl cinnamate) was exposed, developed in tetrahydrofurfuryl alc. 5.5 l. containing Oil Orange E 50 g and then coated with a bath containing aqueous gum arabic (d

= 1.17) 50%, water 46%,  $\text{NH}_4\text{H}_2\text{PO}_4$  2%,  $\text{H}_3\text{PO}_4$  (d = 1.75) 1.1%, and Na alkylated naphthalenesulfonate (Permal BX) 0.9%, at 25° and 90 cm/min.

ST photopolymer lithog plate processing

IT Lithographic plates

(photopolymer, processing of)

IT 96-48-0 97-99-4 105-60-2, uses and miscellaneous 110-49-6 637-64-9  
842-07-9 4435-53-4 55068-74-1 55127-93-0 55127-94-1

RL: USES (Uses)

(lithog. photopolymer plate developer solution containing)

IT 24968-99-8

RL: USES (Uses)

(lithog. plate photopolymer, processing of)

=> s ("sudan I" or diethylaminophenylimino(5a)quinoline  
UNMATCHED LEFT PARENTHESIS '("SUDAN'  
The number of right parentheses in a query must be equal to the  
number of left parentheses.

```
=> s ("sudan I" or diethylaminophenylimino(5a)quinoline)
    5474 "SUDAN"
      11 "SUDANS"
    5475 "SUDAN"
        ("SUDAN" OR "SUDANS")
4350575 "I"
    241 "SUDAN I"
        ("SUDAN" (W) "I")
      95 DIETHYLAMINOPHENYLIMINO
    50472 QUINOLINE
    5769 QUINOLINES
    52144 QUINOLINE
        (QUINOLINE OR QUINOLINES)
      0 DIETHYLAMINOPHENYLIMINO (5A) QUINOLINE
L13    241 ("SUDAN I" OR DIETHYLAMINOPHENYLIMINO (5A) QUINOLINE)
```

```
=> s ("sudan I" or quinoline)
    5474 "SUDAN"
      11 "SUDANS"
    5475 "SUDAN"
        ("SUDAN" OR "SUDANS")
4350575 "I"
    241 "SUDAN I"
        ("SUDAN" (W) "I")
    50472 QUINOLINE
    5769 QUINOLINES
    52144 QUINOLINE
        (QUINOLINE OR QUINOLINES)
L14    52383 ("SUDAN I" OR QUINOLINE)
```

```
=> s ("sudan I" or organometallic)
    5474 "SUDAN"
      11 "SUDANS"
    5475 "SUDAN"
        ("SUDAN" OR "SUDANS")
4350575 "I"
    241 "SUDAN I"
        ("SUDAN" (W) "I")
    46467 ORGANOMETALLIC
    2929 ORGANOMETALLICS
    47748 ORGANOMETALLIC
        (ORGANOMETALLIC OR ORGANOMETALLICS)
L15    47989 ("SUDAN I" OR ORGANOMETALLIC)
```

```
=> s l15 and (photopolymer? or hologra?)
    16985 PHOTOPOLYMER?
    22213 PHOTOPOLYMN
      329 PHOTOPOLYMNS
    22302 PHOTOPOLYMN
        (PHOTOPOLYMN OR PHOTOPOLYMNS)
    1484 PHOTOPOLYMD
    1141 PHOTOPOLYMG
    32050 PHOTOPOLYMER?
        (PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)
    20572 HOLOGRA?
    18118 HOLOG
      14 HOLOGS
    18119 HOLOG
        (HOLOG OR HOLOGS)
    23988 HOLOGRA?
```

(HOLOGRA? OR HOLOG)

L16 85 L15 AND (PHOTOPOLYMER? OR HOLOGRA?)

=> d all 1-85

L16 ANSWER 1 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:538358 CAPLUS  
DN 146:510480  
ED Entered STN: 18 May 2007  
TI Hologram recording material, and hologram recording  
medium  
IN Yoshinari, Jiro; Hayashida, Naoki  
PA TDK Corporation, Japan  
SO U.S. Pat. Appl. Publ., 12pp.  
CODEN: USXXCO  
DT Patent  
LA English  
INCL 430001000; 430002000; 430281100; 430280100; 359003000  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2007111107	A1	20070517	US 2006-556813	20061106
	CN 1963668	A	20070516	CN 2006-10146400	20061113
PRAI	JP 2005-328192	A	20051111		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2007111107	INCL	430001000; 430002000; 430281100; 430280100; 359003000
	IPCI	G03H0001-04 [I,A]; G03C0001-72 [I,A]
	NCL	430/001.000; 430/002.000; 430/281.100; 430/280.100; 359/003.000
CN 1963668	IPCI	G03F0007-075 [I,A]; G03F0007-00 [I,A]; G03H0001-02 [I,A]

AB The present invention provides a hologram recording material which attains high refractive index change flexibility, high sensitivity, low scattering, environment resistance, durability, low shrinkage, and high multiplicity, and is suitable for volume hologram recording. Also, the present invention provides a hologram recording medium. A hologram recording material comprising: an organometallic compound at least containing at least two kinds of metals, oxygen, and an aromatic group, and having an organometallic unit wherein two aromatic groups are bonded directly to one metal; and a photopolymerizable compound containing at least a monofunctional compound (A) having one polymerizable functional group in the mol. The hologram recording material may comprise, as the photopolymerizable compound, a polyfunctional compound (B) having two or more polymerizable functional groups in the mol. A hologram recording medium has a hologram recording material layer.

ST hologram recording material medium

IT Holographic recording materials  
(hologram recording material, and hologram recording medium)

IT 125051-32-3

RL: CAT (Catalyst use); USES (Uses)  
(IRG 784; hologram recording material, and hologram recording medium)

IT 32171-39-4

RL: TEM (Technical or engineered material use); USES (Uses)  
(Light Ester 130A; hologram recording material, and hologram recording medium)

IT 26570-48-9

RL: TEM (Technical or engineered material use); USES (Uses)  
(M 245; hologram recording material, and hologram recording medium)

recording medium)  
 IT 6843-66-9, Diphenyldimethoxysilane 9022-96-2, B-10  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hologram recording material, and hologram  
 recording medium)  
 IT 7429-90-5, Aluminum, uses 7440-21-3, Silicon, uses 7440-31-5, Tin,  
 uses 7440-32-6, Titanium, uses 7440-56-4, Germanium, uses 7440-66-6,  
 Zinc, uses 7440-67-7, Zirconium, uses 118596-75-1, Methoxypolyethylene  
 glycol acrylate-polyethylene glycol diacrylate copolymer  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (hologram recording material, and hologram  
 recording medium)

L16 ANSWER 2 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2007:534446 CAPLUS  
 DN 146:510479  
 ED Entered STN: 18 May 2007  
 TI Hologram recording material and hologram recording  
 medium

IN Hayashida, Naoki; Yoshinari, Jiro  
 PA TDK Corporation, Japan  
 SO U.S. Pat. Appl. Publ., 13pp.  
 CODEN: USXXCO

DT Patent  
 LA English

INCL 430001000; 430002000; 430281100; 430280100; 359003000

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2007111108	A1	20070517	US 2006-556835	20061106
	CN 1963669	A	20070516	CN 2006-10146409	20061113
PRAI	JP 2005-328212	A	20051111		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2007111108	INCL	430001000; 430002000; 430281100; 430280100; 359003000
	IPCI	G03H0001-04 [I,A]; G03C0001-72 [I,A]
	NCL	430/001.000; 430/002.000; 430/281.100; 430/280.100; 359/003.000
CN 1963669	IPCI	G03F0007-075 [I,A]; G03F0007-00 [I,A]; G03H0001-02 [I,A]

AB The present invention provides a hologram recording material  
 which attains high refractive index change, flexibility, high sensitivity,  
 low scattering, environment resistance, durability, low shrinkage, and  
 high multiplicity, and is suitable for volume hologram recording.  
 Also, the present invention provides a hologram recording  
 medium. A hologram recording material comprising: an  
 organometallic compound at least containing at least two kinds of  
 metals, oxygen, and an aromatic group, and having an organometallic  
 unit wherein two aromatic groups are bonded directly to one metal; metal  
 oxide fine particles; and a photopolymerizable compound For  
 example, the metal oxide fine particles are selected from the group  
 consisting of silica fine particles, alumina fine particles, titania fine  
 particles, zirconia fine particles, and complex oxide fine particles  
 containing one or more kinds of metal atoms which constitute said four metal  
 oxides. A hologram recording medium has a hologram  
 recording material layer.

ST hologram recording material medium

IT Holographic recording materials  
 (hologram recording material and hologram recording  
 medium)

IT 125051-32-3, IRG 784  
 RL: CAT (Catalyst use); USES (Uses)

(IRG 784; hologram recording material and hologram recording medium)

IT 26570-48-9, Polyethylene glycol diacrylate  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (M 245; hologram recording material and hologram recording medium)

IT 6843-66-9, Diphenyldimethoxysilane 9022-96-2, B-10  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hologram recording material and hologram recording medium)

IT 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses 7429-90-5, Aluminum, uses 7440-21-3, Silicon, uses 7440-31-5, Tin, uses 7440-32-6, Titanium, uses 7440-56-4, Germanium, uses 7440-66-6, Zinc, uses 7440-67-7, Zirconium, uses 7631-86-9, MEK-ST, uses 13463-67-7, Titania, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (hologram recording material and hologram recording medium)

L16 ANSWER 3 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:194244 CAPLUS

DN 144:265167

ED Entered STN: 03 Mar 2006

TI Die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture

IN Wood, Alan G.; Farnworth, Warren M.; Watkins, Charles M.; Benson, Peter A.

PA USA

SO U.S. Pat. Appl. Publ., 26 pp.

CODEN: USXXCO

DT Patent

LA English

INCL 438106000

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 38, 73, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2006046347	A1	20060302	US 2004-934109	20040902
	US 2006115925	A1	20060601	US 2006-336228	20060120
	US 2006115926	A1	20060601	US 2006-336540	20060120
	US 2006134827	A1	20060622	US 2006-336567	20060120
PRAI	US 2004-934109	A3	20040902		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2006046347	INCL	438106000
	IPCI	H01L0021-50 [I,A]; H01L0021-02 [I,C*]
	IPCR	H01L0021-02 [I,C]; H01L0021-50 [I,A]
	NCL	438/106.000
	ECLA	H01L021/56; H01L021/60C4B; H01L023/31H2B; H01L027/146A6; H01L027/146A10M; H01L027/146V2
US 2006115925	IPCI	H01L0021-50 [I,A]; H01L0021-02 [I,C*]
	IPCR	H01L0021-02 [I,C]; H01L0021-50 [I,A]
	NCL	438/106.000
	ECLA	H01L021/56; H01L021/60C4B; H01L023/31H2B; H01L027/146A6; H01L027/146A10M; H01L027/146V2
US 2006115926	IPCI	H01L0021-50 [I,A]; H01L0021-02 [I,C*]
	IPCR	H01L0021-02 [I,C]; H01L0021-50 [I,A]
	NCL	438/106.000
	ECLA	H01L021/56; H01L021/60C4B; H01L023/31H2B; H01L027/146A6; H01L027/146A10M; H01L027/146V2
US 2006134827	IPCI	H01L0021-50 [I,A]; H01L0021-02 [I,C*]
	IPCR	H01L0021-02 [I,C]; H01L0021-50 [I,A]
	NCL	438/106.000
	ECLA	H01L021/56; H01L021/60C4B; H01L023/31H2B;



- AB A method of packaging at least a portion of a semiconductor die or dice is disclosed. Uncured material may be disposed proximate at least the periphery of at least one semiconductor die and at least partially cured substantially as a whole. Method of forming conductive elements such as traces, vias, and bond pads are also disclosed. More specifically, forming at least one organometallic layer to a substrate surface and selectively heating at least a portion thereof is disclosed. Also, forming a layer of conductive photopolymer over at least a portion of a surface of a substrate and removing at least a portion thereof is disclosed. A microlens having a plurality of mutually adhered layers of cured, optically transmissive material, methods of forming same, and systems so equipped are disclosed.
- ST electronic packaging semiconductor device contact interconnect microlens
- IT Crosslinking  
Dielectric films  
Electric contacts  
Electrodeposition  
Electronic packages  
Electronic packaging process  
Interconnections, electric  
Laser ablation  
Laser heating  
Microlenses  
Micromachining  
Optical films  
Printing (impact)  
Printing (nonimpact)  
Resists  
Thermal decomposition  
(die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Organometallic compounds  
RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Metals, processes  
Polyimides, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Coating process  
(dip; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Computers  
(microprocessors; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Polymers, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(photo-; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Coating process  
(spin; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)
- IT Coating process  
(spray; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)

IT Printing (impact)  
(stamping; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)

IT Ceramics  
(substrates; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)

IT Plastics, processes  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(thermoplastics; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)

IT Interconnections, electric  
(vias; die package, conductive element, semiconductor device including same, microlens, system including same, and methods of manufacture)

L16 ANSWER 4 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1132734 CAPLUS

DN 143:396390

ED Entered STN: 21 Oct 2005

TI Novel optical storage materials, methods of making the storage materials, and methods for storing and reading data

IN Boden, Eugene; McLaughlin, Michael Jeffrey; Lawrence, Brian Lee

PA USA

SO U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM G03H001-04

INCL 430270110

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005233246	A1	20051020	US 2004-826837	20040416
	WO 2005101396	A1	20051027	WO 2005-US12140	20050408
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI US 2004-826837 A 20040416

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005233246	ICM	G03H001-04
	INCL	430270110
	IPCI	G03H0001-04 [ICM,7]
	IPCR	G02B0005-32 [I,C*]; G02B0005-32 [I,A]; G11B0007-00 [I,C*]; G11B0007-0065 [I,A]; G11B0007-24 [I,C*]; G11B0007-245 [I,A]; G11B0007-246 [I,A]
	NCL	430/270.110
	ECLA	G11B007/245; G11B007/246

WO 2005101396 IPCI G11B0007-24 [ICM,7]; G11B0007-0065 [ICS,7]; G11B0007-00  
[ICS,7,C\*]; G02B0005-32 [ICS,7]  
IPCR G02B0005-32 [I,C\*]; G02B0005-32 [I,A]; G11B0007-00  
[I,C\*]; G11B0007-0065 [I,A]; G11B0007-24 [I,C\*];  
G11B0007-245 [I,A]; G11B0007-246 [I,A]  
ECLA G11B007/245; G11B007/246

AB Holog. storage media including a polymeric binder, a photoactive monomer, a photo-initiator, and a stable organic or organometallic dye material are described. The dye may be covalently attached to the polymeric binder, the photoactive monomer, or both. Data may be written into the holog. storage media using light of one wavelength and read using light of a different or the same wavelength.

ST optical storage holog photopolymn compn dye polymer

IT Polyvinyl acetals

RL: NUU (Other use, unclassified); USES (Uses)

(formals; novel optical storage materials, methods of making storage materials, and methods for storing and reading data)

IT Holography

Optical recording materials

(novel optical storage materials, methods of making storage materials, and methods for storing and reading data)

IT Polysiloxanes, uses

Polyvinyl butyrals

RL: NUU (Other use, unclassified); USES (Uses)

(novel optical storage materials, methods of making storage materials, and methods for storing and reading data)

IT 9002-88-4D, Polyethylene, chlorinated 9002-89-5, Polyvinyl alcohol  
9003-00-3, Acrylonitrile-vinyl chloride copolymer 9003-20-7, Polyvinyl  
acetate 9003-39-8, Polyvinylpyrrolidone 9004-35-7, Acetyl cellulose  
9004-57-3, Ethylcellulose 9011-14-7, Poly(methyl methacrylate)  
18724-32-8 32760-80-8 47855-94-7, Tetrakis(pentafluorophenyl)borate  
121239-75-6, p-Octyloxyphenylphenyliodonium hexafluoroantimonate  
122024-07-1, 4-[N-(2-Methacryloyl)ethyl]-N-methylamino]-4'-nitrostilbene-  
methyl methacrylate copolymer 125051-32-3, Bis(η-5-2,4-  
cyclopentadien-1-yl)bis[2,6-difluoro-3-(1H-pyrrol-1-yl)phenyl]titanium  
153606-14-5, Diphenyliodonium tetrakis(pentafluorophenyl)borate  
161728-47-8, 5,7-Diiodo-3-butoxy-6-fluorone 203126-66-3 213471-66-0

RL: NUU (Other use, unclassified); USES (Uses)

(novel optical storage materials, methods of making storage materials, and methods for storing and reading data)

L16 ANSWER 5 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1076184 CAPLUS

DN 145:53247

ED Entered STN: 07 Oct 2005

TI Visible light initiated thiol-ene based reflection H-PDLCs

AU Natarajan, Lalgudi V.; Brown, Dean P.; Wofford, Jeremy M.; Tondiglia,  
Vincent P.; Sutherland, Richard L.; Lloyd, Pam; Jakubiak, Rachel; Vaia,  
Richard; Bunning, Timothy J.

CS Air Force Research Laboratory, Materials and Manufacturing Directorate,  
Wright Patterson AFB, OH, 45433, USA

SO Proceedings of SPIE-The International Society for Optical Engineering  
(2005), 5936 (Liquid Crystals IX), 59360F/1-59360F/8  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 38, 75

AB Multifunctional acrylate formulations containing nematic liquid crystals have  
been shown to form holog. polymer dispersed liquid crystal  
gratings (H-PDLCs) easily using ultra-violet AND/OR visible  
photoinitiators. Laser wavelengths of 364, 476, 488, 514, 532, and 647 nm  
have been used for the fabrication of the gratings. Recently, the use of

a thiol-ene based monomer system has been shown to overcome some of the adverse effects like post polymerization, voltage creep, and nonuniform shrinkage

incurred when using highly functional acrylate monomers. However, Bragg reflection gratings have only been demonstrated utilizing ultra-violet (UV) (363.8 nm Argon ion) photopolymn. Using UV irradiation and single prism geometry limits the upper end of the reflection notch wavelength. In this work, we report on new visible photoinitiator systems developed for the formation of reflective H-PDLCs using thiol-ene monomers. Using these new photoinitiator systems, reflection notches have been routinely written from the visible to the near IR regions. The visible photoinitiator systems included the photoinitiator and radical generator titanocene organometallic complex (com. known as Irgacure 784 Ciba-Geigy), Rhodamine 6G, Pyrromethene, and a radical generating organic peroxide as coinitiator. Reflection gratings were written using laser wavelengths 442, 488, and 532 nm with diffraction efficiencies (DEs) above 70%. Angle tuning allowed for gratings with reflection notches in the near IR (900-1500 nm) to be written using these initiator systems. Rhodamine 6G was found to be more efficient than the other two initiators. We discuss here this new chemical, the morphol., and electro-optical properties of the reflection gratings.

ST visible light initiated thiolene based reflection HPDLCs

IT Diffraction gratings

(Bragg; visible light initiated thiol-ene based reflection H-PDLCs)

IT Polymerization

(photopolymn., thiol-ene; visible light initiated thiol-ene based reflection H-PDLCs)

IT Holographic diffraction gratings

Light

Microstructure

Polymer-dispersed liquid crystals

(visible light initiated thiol-ene based reflection H-PDLCs)

IT Radicals, reactions

RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)

(visible light initiated thiol-ene based reflection H-PDLCs)

IT Thiols, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(visible light initiated thiol-ene based reflection H-PDLCs)

IT 94-36-0, Benzoyl peroxide, uses 989-38-8, Rhodamine 6G 50926-11-9, ITO 54300-60-6, Pyrromethene 99402-95-6, NOA65 125051-32-3, Irgacure 784 229153-41-7, BL 037

RL: TEM (Technical or engineered material use); USES (Uses)

(visible light initiated thiol-ene based reflection H-PDLCs)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bunning, T; Annu Rev Mat Sci 2000, V30, P83 CAPLUS

(2) Burget, D; Polymer 2004, V45, P6561 CAPLUS

(3) Finter, J; Makromol Chem, Macromol Symp 1989, V24, P177 CAPLUS

(4) Ghosh, P; J Polym Sci, Polymer Chemistry 1986, V24, P1053 CAPLUS

(5) Natarajan, L; Chem Mater 2003, V15, P2477 CAPLUS

(6) Sutherland, R; Handbook of Advanced Electronic and Photonic Materials and Devices, Liquid Crystals, Displays, and Laser Materials, Ch 2 2000, V7, P68

(7) Zonca, M; J Macromol Sci 2004, VA41, P741 CAPLUS

L16 ANSWER 6 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:611125 CAPLUS

DN 143:116193

ED Entered STN: 15 Jul 2005

TI Protruded functional polymers with fine microstructures, manufacture thereof, and structures and metal (oxide) films therefrom

IN Imai, Genji

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 41 pp.

CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C08F299-00  
 ICS C08F002-46; C08F020-00; C08F022-40  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 56, 57

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005187766	A	20050714	JP 2003-433797	20031226
	WO 2005063838	A1	20050714	WO 2004-JP19331	20041224
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				
	CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,				
	GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK,				
	LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,				
	NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,				
	TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,				
	AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,				
	EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,				
	RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,				
	MR, NE, SN, TD, TG				
	EP 1698647	A1	20060906	EP 2004-807688	20041224
	R: CH, DE, GB, LI				
	CN 1882624	A	20061220	CN 2004-80034060	20041224
PRAI	JP 2003-433797	A	20031226		
	JP 2003-434119	A	20031226		
	WO 2004-JP19331	W	20041224		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2005187766	ICM	C08F299-00
	ICS	C08F002-46; C08F020-00; C08F022-40
	IPCI	C08F0299-00 [ICM,7]; C08F0002-46 [ICS,7]; C08F0020-00 [ICS,7]; C08F0022-40 [ICS,7]; C08F0022-00 [ICS,7,C*]
	IPCR	C08F0002-46 [I,A]; C08F0002-46 [I,C*]; C08F0020-00 [I,A]; C08F0020-00 [I,C*]; C08F0022-00 [I,C*]; C08F0022-40 [I,A]; C08F0299-00 [I,A]; C08F0299-00 [I,C*]
	FTERM	4J011/AC04; 4J011/MA19; 4J011/MA20; 4J011/NA29; 4J011/NB06; 4J011/PA49; 4J027/AB01; 4J027/AC03; 4J027/AC04; 4J027/AC06; 4J027/AC08; 4J027/AC09; 4J027/AE10; 4J027/AG04; 4J027/AG34; 4J027/AG36; 4J027/CC04; 4J027/CC05; 4J027/CD10; 4J100/AL66P; 4J100/AM55P; 4J100/CA01; 4J100/FA17; 4J100/FA28; 4J100/FA29; 4J100/JA00; 4J100/JA38
WO 2005063838	IPCI	C08F0299-00 [ICM,7]; C08F0002-46 [ICS,7]; C08F0020-00 [ICS,7]; C08F0022-40 [ICS,7]; C08F0022-00 [ICS,7,C*]
	IPCR	C08F0002-46 [I,C*]; C08F0002-48 [I,A]
	ECLA	C08F002/48
EP 1698647	IPCI	C08F0299-00 [ICM,7]; C08F0002-46 [ICS,7]; C08F0020-00 [ICS,7]; C08F0022-40 [ICS,7]; C08F0022-00 [ICS,7,C*]
	ECLA	C08F002/48
CN 1882624	IPCI	C08F0299-00 [I,A]; C08F0002-46 [I,A]; C08F0020-00 [I,A]; C08F0022-40 [I,A]; C08F0022-00 [I,C*]

AB In the process, photopolymerizable precursors including photocurable compds. equipped with plural unsatd. bonds are polymerized by actinic ray (e.g., UV, visible light, near-IR) irradiation (on actinic ray-transmitting substrates) (via mask patterns) in supercrit./subcrit. fluids (e.g., CO<sub>2</sub>) in the presence of functional additives (e.g., organometallic complexes) to give protruded polymers (A; with protrusion height  $\geq 10$  nm and height/diam ratio  $\geq 0.1$ ) like polymer brushes. Also claimed are structures having A on substrates. Metal (oxide) films and metal (oxide)-containing protruded polymers, prepared

by

firing and reducing, resp., of A including the complexes, are useful for medical materials, separators, microreactors, plating catalysts; etc. Thus, a mixture of MIA 200 (polyether bismaleimidoacetate) and (1,5-cyclooctadiene)dimethylplatinum (II) in supercrit. CO<sub>2</sub> was exposed to UV via quartz window to give a polymer on the window, wherein protrusions were grown in perpendicular to the window and Pt concentration is higher in the protrusions. The polymer was fired to give porous Pt film on the protrusions.

- ST protruded polymer photopolymn supercrit subcrit fluid; fine microstructure polymer brush metal oxide; functional metal tip protrusion polymer growth; bismaleimide polyimide protruded polymer palladium plating catalyst
- IT Polyimides, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(bismaleimide-based; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Films  
Firing (heat treating)  
Microstructure  
Reduction  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Organometallic compounds  
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Metals, preparation  
Oxides (inorganic), preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Polymerization  
(photopolymn.; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Catalysts  
(plating; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Polymers, preparation  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(protruded; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT Supercritical fluids  
(subcrit.; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT 12266-92-1, (1,5-Cyclooctadiene)dimethylplatinum (II) 14024-61-4  
RL: CPS (Chemical process); MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT 7440-06-4P, Platinum, preparation  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)
- IT 216249-82-0P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)

IT 14024-61-4DP, reduced  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (plating catalysts; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)

IT 7631-86-9, Silica, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (quartz-type, substrates; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)

IT 124-38-9, Carbon dioxide, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (supercrit.; manufacture of protruded functional polymers with fine microstructures and metal (oxide) films therefrom)

L16 ANSWER 7 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2005:324300 CAPLUS  
 DN 142:370285  
 ED Entered STN: 15 Apr 2005  
 TI Monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput analysis  
 IN Kato, Masaru; Kato, Kumiko  
 PA Japan Science and Technology Agency, Japan  
 SO PCT Int. Appl., 38 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 IC ICM C12N011-14  
 ICS C12M001-40  
 CC 9-1 (Biochemical Methods)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005033304	A1	20050414	WO 2004-JP14055	20040927
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005102574	A	20050421	JP 2003-339280	20030930
PRAI JP 2003-339280	A	20030930		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005033304	ICM	C12N011-14
	ICS	C12M001-40
	IPCI	C12N0011-14 [ICM,7]; C12N0011-00 [ICM,7,C*]; C12M0001-40 [ICS,7]
	IPCR	C12N0011-00 [I,C*]; C12N0011-02 [I,A]; C12M0001-40 [I,C*]; C12M0001-40 [I,A]
	ECLA	C12M001/40
JP 2005102574	IPCI	C12N0011-02 [ICM,7]; C12N0011-00 [ICM,7,C*]
	IPCR	C12M0001-40 [I,A]; C12M0001-40 [I,C*]
	FTERM	4B033/NA23; 4B033/NA25; 4B033/NA30; 4B033/NB15; 4B033/NB24; 4B033/NB34; 4B033/NB63; 4B033/NB68; 4B033/NB69; 4B033/NC06; 4B033/NC07; 4B033/NC16; 4B033/ND03; 4B033/ND05

AB This invention provides a functional substance immobilization component which can be used in drug screening, and clin. test, or detection of

environmental factor variation, and as a functional substance bioreactor, which can be easily produced and are available at low price, excelling in the variety of applicable physiol. active substance and the functional capability. Particularly, an immobilization component coated with a thin film wherein a functional substance is incorporated in a network structure of nanometer order (nanostructure); a porous immobilization component having pores of nanometer order; and a process for forming the thin film on the immobilization component; are provided. A miniaturized pepsin reactor was prepared inside a fused-silica capillary (i.d. 75  $\mu$ m) by coating a pepsin-containing gel on a photopolymd. porous silica monolith. The pepsin-encapsulated film was prepared by a sol-gel method. The sol-gel reaction was optimized so that the sol solution containing pepsin forms a thin film on the photopolymd. sol-gel (PSG) monolith that was initially fabricated at the inlet of the capillary. Pepsin was encapsulated into the gel matrix without losing its activity. The large surface area of the PSG monolith enabled the immobilized pepsin to achieve a high catalytic turnover rate, and the porous nature of the PSG promotes penetration of large mol. proteins into the column. The durability and repeatability of the fabricated pepsin-coated column was tested and found to be satisfactory. A miniaturized trypsin reactor was also prepared by coating a trypsin-containing gel on a porous silica monolith. The trypsin-encapsulated gel was prepared by the sol-gel method. The trypsin was encapsulated into the gel matrix without losing its activity. The silica monolith was fabricated to fit into a 96-well microtiter plate well and could then be easily removed. The encapsulated trypsin exhibits an increased stability even after continuous use compared with that in free solution

- ST immobilization component coated substance thin film; monolithic bioreactor immobilizing trypsin high throughput analysis
- IT Nanotubes
  - (carbon, immobilization of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Immobilization, molecular or cellular
  - (enzyme; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Sol-gel processing
  - (film prepared by; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Capillary tubes
  - Columns and Towers
  - Microarray technology
    - (forming porous immobilization component inside; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Carbohydrates, miscellaneous
  - Catenanes
  - DNA
  - Fullerenes
  - Lipids, miscellaneous
  - Nucleic acids
  - Peptide nucleic acids
  - Proteins
  - RNA
  - RL: MSC (Miscellaneous)
    - (immobilization of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Catalysts
  - (metal, immobilization of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)
- IT Bioreactors
  - Coating process
  - Films
  - Fluorometry



Immobilization, molecular or cellular  
Immobilization, molecular or cellular  
Microtiter plates  
Nanostructures

Sol-gel processing

(monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Polyoxyalkylenes, uses

RL: NUU (Other use, unclassified); USES (Uses)

(monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Pore

(nanopore, immobilization component having; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Nanostructures

(nanopores, immobilization component having; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Porous materials

(nanoporous, as immobilization component; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Polymerization

(photopolymerization, of porous silica monolith; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Rotaxanes

RL: MSC (Miscellaneous)

(polymeric, immobilization of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Sol-gel processing

(polymerization, film prepared by; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Microsome

(porous thin film composed of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Organometallic compounds

RL: TEM (Technical or engineered material use); USES (Uses)

(porous thin film composed of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Immobilization, molecular or cellular

(protein; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT Polymerization

(sol-gel, film prepared by; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT 67-66-3, Chloroform, uses 108-88-3, Toluene, uses 25322-68-3,

Polyethylene glycol

RL: NUU (Other use, unclassified); USES (Uses)

(as separation solvent, added to hydrolysis solution; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

IT 9001-75-6, Pepsin 9002-07-7, Trypsin 9030-08-4, Glucuronyl transferase

9035-51-2, Cytochrome P 450, miscellaneous

RL: MSC (Miscellaneous)

(immobilization of; monolithic bioreactor immobilizing functional substance on thin film coated component for high-throughput anal.)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Asahi Kasei Corp; JP 2003270230 A 2003 CAPLUS

- (2) Kato, D; Kagaku Kogyo 2003, V54(5), P339
- (3) Kato, M; Anal Chem 2002, V74(8), P1915 CAPLUS
- (4) Kato, M; Anal Chem 2004, V76(7), P1896 CAPLUS
- (5) Kato, M; J Pharm Biomed Anal 2003, V30(6), P1845 CAPLUS
- (6) Kato, M; JOURNAL OF CHROMATOGRAPHY A 2001, V924(1-2), P187 CAPLUS
- (7) Kato, M; JOURNAL OF CHROMATOGRAPHY A 2002, V961(1), P45 CAPLUS
- (8) Sakai, K; Dai 22 Kai Proceedings of the Symposium on Cappelary Electrophoresis 2002, P17
- (9) Sakai-Kato, K; Anal Biochem 2002, V308(2), P278 CAPLUS
- (10) Sakai-Kato, K; Anal Chem 2002, V74(13), P2943 CAPLUS
- (11) Sakai-Kato, K; Anal Chem 2003, V75(3), P388 CAPLUS
- (12) Sakai-Kato, K; J Pharm Biomed Anal 2003, V31(2), P299 CAPLUS

L16 ANSWER 8 OF 85 CAPLUS. COPYRIGHT 2007 ACS on STN

AN 2004:1121398 CAPLUS

DN 144:160151

ED Entered STN: 22 Dec 2004

TI Advances in photoconductive and photorefractive cyclometalated complexes development

AU Golemme, Attilio; Aiello, Iolinda; Dattilo, Davide; Pucci, D.; Ghedini, Mauro; Talarico, M.; Termine, Roberto

CS Dipartimento di Chimica, Univ. della Calabria, Rende, 87036, Italy

SO Proceedings of SPIE-The International Society for Optical Engineering (2004), 5521(Organic Holographic Materials and Applications II), 103-112  
CODEN: PSISDG; ISSN: 0277-786X

PB SPIE-The International Society for Optical Engineering

DT Journal

LA English

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

AB The authors present results on the photorefractive performance of cyclometalated complexes in which a central metal atom (Pd or Pt) coordinates two different mol. sub-units in a single species. Depending on the details of their structure, these mols. aggregate in crystals, glasses or liquid crystalline phases. The photorefractive properties of the complexes are discussed by treating sep. results obtained in different phases. Crystalline compds. can be dissolved in suitable polymers and the authors show how phase separation in polymeric composites, which is usually detrimental for sample stability, can be controlled and used to increase photorefractive performance parameters by orders of magnitude. In addition, the authors present a method for estimating the intensity of the space-charge field in chiral smectic phases without using any of the standard models developed for crystalline or amorphous materials.

ST photocond photorefractivity cyclometalated organometallic complex holog

IT Liquid crystals

(chiral smectic; photoconductive and photorefractive properties of cyclometalated organometallic complexes)

IT Amorphous materials

Degenerate four wave mixing

Holographic recording materials

Holography

Photoconductors

Photorefractive effect

Photorefractive materials

Refractive index

Space charge

(photoconductive and photorefractive properties of cyclometalated organometallic complexes)

IT Nonlinear optical properties

(two-beam-coupling; photoconductive and photorefractive properties of cyclometalated organometallic complexes)

IT 9011-15-8, Poly(isobutyl methacrylate) 9017-27-0, Poly( $\alpha$ -methylstyrene-vinyltoluene) 319017-35-1 319017-36-2 319017-37-3

587829-99-0 873795-64-3 873795-65-4 873795-66-5 873795-67-6  
 873795-68-7 873795-69-8 873795-70-1 873795-71-2 873795-72-3  
 873795-73-4 873795-74-5 873795-75-6 873795-76-7 873795-77-8  
 873795-78-9 873795-79-0 873795-80-3 873795-81-4 873795-82-5  
 873795-83-6

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
 (Physical process); PROC (Process)  
 (photoconductive and photorefractive properties of cyclometalated  
 organometallic complexes)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Aiello, I; Adv Mater 2002, V14, P1233 CAPLUS
- (2) Cheben, P; Nature 2000, V408, P64 CAPLUS
- (3) Ducharme, S; Phys Rev Lett 1991, V66, P1846 CAPLUS
- (4) Khoo, I; Opt Lett 1994, V19, P1723 CAPLUS
- (5) Lagerwall, S; Ferroelectric and Antiferroelectric Liquid Crystals 1999
- (6) Meerholz, K; Nature 1994, V371, P497 CAPLUS
- (7) Moerner, W; Ann Rev Mater Sci 1997, V27, P585 CAPLUS
- (8) Moerner, W; J Opt Soc Am B 1994, V11, P320 CAPLUS
- (9) Ostroverkhova, O; ChemPhysChem 2003, V4, P732 CAPLUS
- (10) Rudenko, E; JETP Lett 1994, V59, P142
- (11) Sandalphon, B; Appl Opt 1996, V35, P2346 CAPLUS
- (12) Sasaki, T; Appl Phys Lett 2001, V78, P4112 CAPLUS
- (13) Schildkraut, J; J Appl Phys 1992, V72, P1888 CAPLUS
- (14) Schildkraut, J; J Appl Phys 1992, V72, P5055 CAPLUS
- (15) Solymar, L; The Physics and Applications of Photorefractive Materials 1996
- (16) Talarico, M; Adv Mater 2003, V15, P1374 CAPLUS
- (17) Termine, R; Appl Phys Lett 2001, V78, P688 CAPLUS
- (18) Termine, R; J Phys Chem B 2002, V106, P4105 CAPLUS
- (19) Wiederrecht, G; Adv Mater 2000, V12, P1533 CAPLUS
- (20) Yeh, P; Introduction to Photorefractive Nonlinear Optics 1993

L16 ANSWER 9 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:801619 CAPLUS

DN 141:322708

ED Entered STN: 01 Oct 2004

TI High-refractive index cured films, preparation of curable coating  
 compositions for films, and antireflective films, polarizers, and displays  
 assembled with the same

IN Kato, Eiichi

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G02B001-10

ICS B32B009-00; B32B027-04; C08J005-18; C09D004-00; C09D005-00;  
 C09D007-12; C09D143-04; C09D183-04; C09D185-00; G02B005-30;  
 G02F001-1335; C08L083-04

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

Section cross-reference(s): 38, 73

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004271735	A	20040930	JP 2003-60351	20030306
PRAI JP 2003-60351		20030306		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004271735	ICM	G02B001-10
	ICS	B32B009-00; B32B027-04; C08J005-18; C09D004-00; C09D005-00; C09D007-12; C09D143-04; C09D183-04; C09D185-00; G02B005-30; G02F001-1335; C08L083-04
	IPCI	G02B0001-10 [ICM,7]; B32B0009-00 [ICS,7]; B32B0027-04

[ICS,7]; C08J0005-18 [ICS,7]; C09D0004-00 [ICS,7];  
C09D0005-00 [ICS,7]; C09D0007-12 [ICS,7]; C09D0143-04  
[ICS,7]; C09D0143-00 [ICS,7,C\*]; C09D0183-04 [ICS,7];  
C09D0185-00 [ICS,7]; G02B0005-30 [ICS,7]; G02F0001-1335  
[ICS,7]; G02F0001-13 [ICS,7,C\*]; C08L0083-04 [ICS,7];  
C08L0083-00 [ICS,7,C\*]  
IPCR B32B0009-00 [I,A]; B32B0009-00 [I,C\*]; B32B0027-04  
[I,A]; B32B0027-04 [I,C\*]; C08J0005-18 [I,A];  
C08J0005-18 [I,C\*]; C09D0004-00 [I,A]; C09D0004-00  
[I,C\*]; C09D0005-00 [I,A]; C09D0005-00 [I,C\*];  
C09D0007-12 [I,A]; C09D0007-12 [I,C\*]; C09D0143-00  
[I,C\*]; C09D0143-04 [I,A]; C09D0183-04 [I,A];  
C09D0183-04 [I,C\*]; C09D0185-00 [I,A]; C09D0185-00  
[I,C\*]; G02B0001-10 [I,A]; G02B0001-10 [I,C\*];  
G02B0005-30 [I,A]; G02B0005-30 [I,C\*]; G02F0001-13  
[I,C\*]; G02F0001-1335 [I,A]  
FTERM 2H049/BA02; 2H049/BB33; 2H049/BB65; 2H049/BC22;  
2H091/FA08; 2H091/FA37; 2H091/FB04; 2H091/FB06;  
2H091/FB13; 2H091/FC10; 2H091/FC29; 2H091/FD06;  
2H091/LA11; 2H091/LA12; 2K009/AA06; 2K009/AA15;  
2K009/BB24; 2K009/BB28; 2K009/CC03; 2K009/CC14;  
2K009/CC45; 2K009/DD02; 4F071/AA33; 4F071/AA67;  
4F071/AB06; 4F071/AB08; 4F071/AB09; 4F071/AB18;  
4F071/AF29; 4F071/AH19; 4F071/BA02; 4F071/BB02;  
4F071/BC02; 4F071/BC17; 4F100/AA01B; 4F100/AA21B;  
4F100/AH08B; 4F100/AJ06A; 4F100/AR00A; 4F100/BA02;  
4F100/BA04; 4F100/BA07; 4F100/BA10A; 4F100/BA10D;  
4F100/CA30B; 4F100/DE01B; 4F100/JB14B; 4F100/JN01A;  
4F100/JN06; 4F100/JN18B; 4F100/JN18C; 4F100/JN18D;  
4F100/YY00B; 4F100/YY00C; 4F100/YY00D; 4J038/CL002;  
4J038/DL032; 4J038/DM021; 4J038/FA212; 4J038/HA216;  
4J038/KA03; 4J038/KA09; 4J038/PA17

AB The cured films with refractive index 1.6-2.4 are formed from curable  
coating compns. containing (A) TiO<sub>2</sub>-based inorg. fine particles containing Co,  
Zr,

and/or Al; (B) hydrolyzable functional group-containing organometallic  
compds. and/or their partial condensates, and optionally, (C) actinic  
energy ray-reactive and hydrolyzable functional group-containing organosilicon  
compds. and/or their partial condensates and photopolymer.  
initiators. The preparation of the curable coating compns. involves a step of  
inorg. ultrafine particle dispersions with mean particle size  $\leq 100$   
nm by wet dispersion of the inorg. particles and dispersing agents containing  
 $\geq 1$  polar groups by using media with mean particle size  $< 1$  mm. The  
antireflective (AR) film comprises a transparent support having thereon a  
bilayered structure composed of the cured film layer topped with a  
low-refractive index (n.) layer having n.  $< 1.55$ . In another alternative,  
the AR film comprises a transparent support having thereon a 3-layered  
structure composed of bilayers of the cured film layers with different n.  
topped with a low-n. layer having n.  $< 1.55$ . The polarizer employs the AR  
film as at least one of the protective films of the polarizing film. In  
another alternative, the polarizer employs the AR film as one of the  
protective films of the polarizing film and an optically compensating film  
having optical anisotropy as the other protective film of the polarizing  
film. The display is assembled with the AR film or the polarizer on the  
imaging surface.

ST cobalt contg titania cured antireflective film; zirconium contg titania  
cured antireflective film; aluminum contg titania cured antireflective  
film; UV curable coating antireflective film display; display polarizer  
protection antireflective film titania

IT Fluoropolymers, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked, antisoiling layer; preparation of curable coating compns. for  
antireflective protective films for display polarizers)

IT Fluoropolymers, preparation

RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(di-Me siloxane-, Opstar JN 7228, crosslinked, low refractive index  
layer; preparation of curable coating compns. for antireflective protective  
films for display polarizers)

IT Polysiloxanes, preparation  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(di-Me, fluorine-containing, Opstar JN 7228, crosslinked, low refractive  
index layer; preparation of curable coating compns. for antireflective  
protective films for display polarizers)

IT Antireflective films  
Optical imaging devices  
Polarizers  
(preparation of curable coating compns. for antireflective protective films  
for display polarizers)

IT Silsesquioxanes  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(silicate-, high refractive index layer; preparation of curable coating  
compns. for antireflective protective films for display polarizers)

IT 9012-09-3, Fuji Tac TD 80UF  
RL: DEV (Device component use); TEM (Technical or engineered material  
use); USES (Uses)  
(base film; preparation of curable coating compns. for antireflective  
protective films for display polarizers)

IT 251981-52-9P, Opstar JSR-JN 7214  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(crosslinked, antisoiling layer; preparation of curable coating compns. for  
antireflective protective films for display polarizers)

IT 758705-19-0 763271-19-8 763271-35-8 763271-42-7  
RL: NUU (Other use, unclassified); USES (Uses)  
(dispersing agents; preparation of curable coating compns. for  
antireflective protective films for display polarizers)

IT 13463-67-7, Titania, uses  
RL: DEV (Device component use); MOA (Modifier or additive use); TEM  
(Technical or engineered material use); USES (Uses)  
(fine particles, containing Co, Zr, and/or Al; preparation of curable  
coating  
compns. for antireflective protective films for display polarizers)

IT 254887-33-7P, DPHA-UV 6300B copolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(hard coat layer; preparation of curable coating compns. for antireflective  
protective films for display polarizers)

IT 67653-78-5P, DPHA homopolymer  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(hard coating; preparation of curable coating compns. for antireflective  
protective films for display polarizers)

IT 152791-95-2P 763271-62-1P 763271-69-8P  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(high refractive index layer; preparation of curable coating compns. for  
antireflective protective films for display polarizers)

IT 9002-89-5, Poly(vinyl alcohol)  
RL: DEV (Device component use); USES (Uses)  
(iodine-doped, polarizing film; preparation of curable coating compns. for  
antireflective protective films for display polarizers)

IT 4369-14-6DP, KBM 5103, hydrolytic condensate, polymer with  
heat-crosslinkable polysiloxane-fluoropolymers  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(low refractive index layer; preparation of curable coating compns. for

antireflective protective films for display polarizers)

IT 763271-49-4P  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (medium refractive index layer; preparation of curable coating compns. for  
 antireflective protective films for display polarizers)

IT 766509-47-1, MPT 129  
 RL: DEV (Device component use); MOA (Modifier or additive use); TEM  
 (Technical or engineered material use); USES (Uses)  
 (preparation of curable coating compns. for antireflective protective films  
 for display polarizers)

IT 9012-09-3DP, Fuji Tac TD 80UF, saponified  
 RL: DEV (Device component use); IMF (Industrial manufacture); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (protective film; preparation of curable coating compns. for antireflective  
 protective films for display polarizers)

IT 7429-90-5, Aluminum, uses 7440-48-4, Cobalt, uses 7440-67-7,  
 Zirconium, uses  
 RL: DEV (Device component use); MOA (Modifier or additive use); TEM  
 (Technical or engineered material use); USES (Uses)  
 (titania fine particles containing; preparation of curable coating compns.  
 for  
 antireflective protective films for display polarizers)

IT 194739-90-7, YTZ  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (wet milling ball; preparation of curable coating compns. for antireflective  
 protective films for display polarizers)

L16 ANSWER 10 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2004:470685 CAPLUS  
 DN 141:25190  
 ED Entered STN: 10 Jun 2004  
 TI Photocurable resin compositions and ink-jet inks containing them with low  
 viscosity and excellent jetting properties and UV curability  
 IN Kondo, Ai  
 PA Konica Minolta Holdings Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 25 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C08G065-18  
 ICS B41J002-01; B41M005-00; C08F002-44; C08F016-00; C08G059-68;  
 C09D011-00

CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004161887	A	20040610	JP 2002-329504	20021113
PRAI	JP 2002-329504		20021113		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004161887	ICM	C08G065-18
	ICS	B41J002-01; B41M005-00; C08F002-44; C08F016-00; C08G059-68; C09D011-00
	IPCI	C08G0065-18 [ICM,7]; C08G0065-00 [ICM,7,C*]; B41J0002-01 [ICS,7]; B41M0005-00 [ICS,7]; C08F0002-44 [ICS,7]; C08F0016-00 [ICS,7]; C08G0059-68 [ICS,7]; C08G0059-00 [ICS,7,C*]; C09D0011-00 [ICS,7]
	IPCR	B41J0002-01 [I,A]; B41J0002-01 [I,C*]; B41M0005-00 [I,A]; B41M0005-00 [I,C*]; C08F0002-44 [I,A]; C08F0002-44 [I,C*]; C08F0016-00 [I,A]; C08F0016-00 [I,C*]; C08G0059-00 [I,C*]; C08G0059-68 [I,A]; C08G0065-00 [I,C*]; C08G0065-18 [I,A]; C09D0011-00

[I,A]; C09D0011-00 [I,C\*]

FTERM 2C056/EC21; 2C056/EC29; 2C056/FC02; 2C056/HA44;  
2H086/BA55; 2H086/BA59; 2H086/BA62; 4J005/AA07;  
4J005/BB02; 4J011/PA07; 4J011/PA22; 4J011/PA47;  
4J011/PA49; 4J011/PB25; 4J011/PB40; 4J011/PC02;  
4J011/SA74; 4J011/SA79; 4J011/SA82; 4J011/SA83;  
4J011/SA84; 4J011/SA87; 4J036/AA01; 4J036/AB01;  
4J036/GA01; 4J036/GA02; 4J036/GA03; 4J036/GA04;  
4J036/HA02; 4J036/JA15; 4J036/KA03; 4J039/AD06;  
4J039/AD21; 4J039/AE05; 4J039/AE07; 4J039/AE11;  
4J039/BC59; 4J039/BE01; 4J039/BE27; 4J039/EA05;  
4J039/EA41; 4J039/EA44; 4J039/GA24

- AB The compns. contain polymerizable compds., photopolymn.  
initiators, colorants, and organometallic coupling agents.  
Thus, an ink containing a 15.00:2.25:82.75 Toner Yellow HG (C.I. Pigment  
yellow 180)-acetoalkoxyaluminum diisopropylate-Aron Oxetane OXT 221  
(oxetane compound) mixture 27.0, Celloxide 2021P (epoxy compound) 30.0, OXT 221  
17.0, OXT 211 (oxetane compound) 30.0, and SP 152 (photoacid generator) 5.0  
parts showed good dispersibility after 3 days at room temperature and no  
tackiness just after printing.
- ST photocurable resin pigment viscosity UV ink; ink jet printing aluminum  
coupler dispersibility
- IT Carbon black, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(MA 7, pigment; UV-curable ink-jet inks containing organometallic  
coupling agents with good dispersibility, jetting properties, and  
curability)
- IT Coupling agents  
(Si, Ti, and Al; UV-curable ink-jet inks containing organometallic  
coupling agents with good dispersibility, jetting properties, and  
curability)
- IT Pigments, nonbiological  
(UV-curable ink-jet inks containing organometallic coupling  
agents with good dispersibility, jetting properties, and curability)
- IT Epoxy resins, uses  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(UV-curable ink-jet inks containing organometallic coupling  
agents with good dispersibility, jetting properties, and curability)
- IT Inks  
(jet-printing; UV-curable ink-jet inks containing organometallic  
coupling agents with good dispersibility, jetting properties, and  
curability)
- IT Inks  
(printing, UV-curable; UV-curable ink-jet inks containing  
organometallic coupling agents with good dispersibility,  
jetting properties, and curability)
- IT 5280-68-2, C.I. Pigment Red 146  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(Seikafast Carmine 3870, pigment; UV-curable ink-jet inks containing  
organometallic coupling agents with good dispersibility,  
jetting properties, and curability)
- IT 184877-11-0P 674288-73-4P  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
(Technical or engineered material use); PREP (Preparation); USES (Uses)  
(UV-curable ink-jet inks containing organometallic coupling  
agents with good dispersibility, jetting properties, and curability)
- IT 7429-90-5D, Aluminum, derivs. 7440-21-3D, Silicon, derivs.  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material  
use); USES (Uses)  
(coupling agent containing; UV-curable ink-jet inks containing  
organometallic coupling agents with good dispersibility,  
jetting properties, and curability)

IT 7440-32-6D, Titanium, derivs.  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (coupling agent; UV-curable ink-jet inks containing organometallic coupling agents with good dispersibility, jetting properties, and curability)

IT 205944-57-6, SP 152  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoacid generator; UV-curable ink-jet inks containing organometallic coupling agents with good dispersibility, jetting properties, and curability)

IT 147-14-8, Cyanine Blue 4927 9003-07-0, MA 7 13463-67-7, Titanium dioxide, uses 42445-78-3, Shigenox OWP 77804-81-0, Toner Yellow HG  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (pigment; UV-curable ink-jet inks containing organometallic coupling agents with good dispersibility, jetting properties, and curability)

L16 ANSWER 11 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2004:380035 CAPLUS  
 DN 141:89423  
 ED Entered STN: 11 May 2004  
 TI From zirconium to titanium: the effect of the metal in tert-butyl acrylate photoinitiated polymerization  
 AU Polo, Eleonora; Barbieri, Andrea; Traverso, Orazio  
 CS C.N.R., Istituto per la Sintesi Organica e la Fotoreattività, Ferrara, 44100, Italy  
 SO New Journal of Chemistry (2004), 28(5), 652-656  
 CODEN: NJCHES; ISSN: 1144-0546  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 29, 67

AB We report here the synthesis, photochem. and photoinitiator activity of some titanocenes (1-4) and compare the results with those obtained for the corresponding zirconocenes (5-8). Anal. of the electronic spectra showed that the energy modulation of the lowest electronic transition, which appears to be LMCT in character, is driven both by the substituent on the cyclopentadienyl moiety and by the metal center. Furthermore, the excited state resulting from irradiation of the complexes at the wavelength of the LMCT transition undergoes ligand-metal bond dissociation with formation of a radical pair, as evidenced by EPR spectroscopy coupled with spin trapping techniques. All the complexes were very active, compared with known organometallic photoinitiators, for the free-radical photopolymerization of tert-butylacrylate. The titanium complexes 1-4, which can be used with visible light, were more active than the zirconium derivs. 5-8. The better yields in photopolymerization can be interpreted on the basis of the combined effect of two factors: (i) the photoreactivity of the complexes in solution and (ii) the high persistence of the Ti(III) radical species in solution, which guarantees high concns. of initiators in the polymerization process.

ST titanium metallocene photochem polymerization catalyst performance polybutylacrylate

IT Polymerization catalysts  
 (photopolymerization; the effect of metal in metallocene catalyzed tert-Bu acrylate photoinitiated polymerization)

IT Molecular weight  
 Polydispersity  
 Spin trapping  
 Viscosity  
 (the effect of metal in metallocene catalyzed tert-Bu acrylate photoinitiated polymerization)

IT Metallocenes



RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
PREP (Preparation); USES (Uses)

(the effect of metal in metallocene catalyzed tert-Bu acrylate  
photoinitiated polymerization)

IT 95-13-6, 1H-Indene 4505-48-0 7550-45-0, Titanium tetrachloride,  
reactions 24279-06-9 156722-77-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(in preparation of titanocenes for studying metal effect on metallocene  
catalyzed tert-Bu acrylate photoinitiated polymerization)

IT 12113-38-1, Bis( $\eta$ 5-(4,5,6,7-tetrahydro-1H-indenyl))zirconium  
dichloride 12148-49-1, Bisindenylzirconium dichloride 163167-60-0,  
Bis(2-phenylindenyl)zirconium dichloride 201403-57-8,  
Bis( $\eta$ 5-(2-phenyl-4,5,6,7-tetrahydro-1H-indenyl))zirconium dichloride

RL: CAT (Catalyst use); PRP (Properties); USES (Uses)

(the effect of metal in metallocene catalyzed tert-Bu acrylate  
photoinitiated polymerization)

IT 12113-02-9P, Bisindenyltitanium dichloride 12113-37-0P,  
Bis( $\eta$ 5-(4,5,6,7-tetrahydro-1H-indenyl))titanium dichloride  
156845-43-1P, Bis( $\eta$ 5-(2-phenyl-4,5,6,7-tetrahydro-1H-indenyl))titanium  
dichloride 420134-32-3P, Bis(2-phenylindenyl)titanium dichloride

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation);  
PREP (Preparation); USES (Uses)

(the effect of metal in metallocene catalyzed tert-Bu acrylate  
photoinitiated polymerization)

IT 25232-27-3P, Poly(tert-butyl acrylate)

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(the effect of metal in metallocene catalyzed tert-Bu acrylate  
photoinitiated polymerization)

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L16 ANSWER 12 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:100564 CAPLUS

DN 140:148452

ED Entered STN: 08 Feb 2004

TI Method of making crystalline nanoparticles from organometallic  
 and transition metal complexes

IN Bonitatebus, Peter John; Acar, Havva Yagci

PA General Electric Company, USA

SO U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM B05D007-00

INCL 427212000

CC 48-8 (Unit Operations and Processes)

Section cross-reference(s): 27, 29, 35, 46

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004022937	A1	20040205	US 2002-208945	20020731
	JP 2004067508	A	20040304	JP 2003-282299	20030730
	CN 1475460	A	20040218	CN 2003-152227	20030731
	EP 1394223	A1	20040303	EP 2003-254809	20030731
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	US 2006088659	A1	20060427	US 2005-36935	20050118
PRAI	US 2002-208945	A	20020731		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004022937	ICM	B05D007-00
	INCL	427212000
	IPCI	B05D0007-00 [ICM,7]
	IPCR	B82B0003-00 [I,C*]; B82B0003-00 [I,A]; C01G0045-00 [I,C*]; C01G0045-00 [I,A]; C01G0049-00 [I,C*]; C01G0049-00 [I,A]; C01G0049-02 [I,C*]; C01G0049-02 [I,A]; C01G0049-08 [I,A]; C01G0051-00 [I,C*]; C01G0051-00 [I,A]; C09C0001-22 [I,C*]; C09C0001-22 [I,A]; C09C0001-24 [I,A]; C09C0003-08 [I,C*]; C09C0003-08 [I,A]; H01F0001-00 [I,C*]; H01F0001-00 [I,A]; H01F0001-12 [I,C*]; H01F0001-37 [I,A]
	NCL	427/212.000
	ECLA	C01G045/00; C01G049/00C12; C01G049/02; C01G049/08; C01G051/00; C09C001/22; C09C001/24; C09C003/08; H01F001/00E10; H01F001/00E10M; H01F001/37
JP 2004067508	IPCI	C01G0049-00 [ICM,7]; B82B0003-00 [ICS,7]; C01G0049-02 [ICS,7]; C01G0051-00 [ICS,7]
	IPCR	C01G0045-00 [I,A]; C01G0045-00 [I,C*]; C01G0049-00 [I,A]; C01G0049-00 [I,C*]; C01G0049-02 [I,A]; C01G0049-02 [I,C*]; C01G0049-08 [I,A]; C01G0051-00 [I,A]; C01G0051-00 [I,C*]; C09C0001-22 [I,A]; C09C0001-22 [I,C*]; C09C0001-24 [I,A]; C09C0003-08

[I,A]; C09C0003-08 [I,C\*]; H01F0001-00 [I,A];  
H01F0001-00 [I,C\*]; H01F0001-12 [I,C\*]; H01F0001-37  
[I,A]

CN 1475460 FTERM 4G002/AA02; 4G002/AA06; 4G002/AA11; 4G002/AB07;  
4G002/AD04; 4G002/AE05; 4G048/AA03; 4G048/AB02;  
4G048/AC03; 4G048/AD04; 4G048/AD06; 4G048/AE08

IPCI C04B0035-628 [ICM,7]; C04B0035-626 [ICM,7,C\*]  
IPCR B82B0003-00 [I,C\*]; B82B0003-00 [I,A]; C01G0045-00  
[I,C\*]; C01G0045-00 [I,A]; C01G0049-00 [I,C\*];  
C01G0049-00 [I,A]; C01G0049-02 [I,C\*]; C01G0049-02  
[I,A]; C01G0049-08 [I,A]; C01G0051-00 [I,C\*];  
C01G0051-00 [I,A]; C09C0001-22 [I,C\*]; C09C0001-22  
[I,A]; C09C0001-24 [I,A]; C09C0003-08 [I,C\*];  
C09C0003-08 [I,A]; H01F0001-00 [I,C\*]; H01F0001-00  
[I,A]; H01F0001-12 [I,C\*]; H01F0001-37 [I,A]

EP 1394223 ECLA C01G045/00; C01G049/00C12; C01G049/02; C01G049/08;  
C01G051/00; C09C001/22; C09C001/24; C09C003/08;  
H01F001/00E10; H01F001/00E10M; H01F001/37

IPCI C09C0003-10 [ICM,7]; C09C0001-24 [ICS,7]; C09C0001-22  
[ICS,7,C\*]  
IPCR B82B0003-00 [I,C\*]; B82B0003-00 [I,A]; C01G0045-00  
[I,C\*]; C01G0045-00 [I,A]; C01G0049-00 [I,C\*];  
C01G0049-00 [I,A]; C01G0049-02 [I,C\*]; C01G0049-02  
[I,A]; C01G0049-08 [I,A]; C01G0051-00 [I,C\*];  
C01G0051-00 [I,A]; C09C0001-22 [I,C\*]; C09C0001-22  
[I,A]; C09C0001-24 [I,A]; C09C0003-08 [I,C\*];  
C09C0003-08 [I,A]; H01F0001-00 [I,C\*]; H01F0001-00  
[I,A]; H01F0001-12 [I,C\*]; H01F0001-37 [I,A]

ECLA C01G045/00; C01G049/00C12; C01G049/02; C01G049/08;  
C01G051/00; C09C001/22; C09C001/24; C09C003/08;  
H01F001/00E10; H01F001/00E10M; H01F001/37

US 2006088659 IPCI B05D0007-00 [I,A]  
IPCR B05D0007-00 [I,A]; B82B0003-00 [I,C\*]; B82B0003-00  
[I,A]; B05D0007-00 [I,C]; C01G0045-00 [I,C\*];  
C01G0045-00 [I,A]; C01G0049-00 [I,C\*]; C01G0049-00  
[I,A]; C01G0049-02 [I,C\*]; C01G0049-02 [I,A];  
C01G0049-08 [I,A]; C01G0051-00 [I,C\*]; C01G0051-00  
[I,A]; C09C0001-22 [I,C\*]; C09C0001-22 [I,A];  
C09C0001-24 [I,A]; C09C0003-08 [I,C\*]; C09C0003-08  
[I,A]; H01F0001-00 [I,C\*]; H01F0001-00 [I,A];  
H01F0001-12 [I,C\*]; H01F0001-37 [I,A]

NCL 427/212.000  
ECLA C01G045/00; C01G049/00C12; C01G049/02; C01G049/08;  
C01G051/00; C09C001/22; C09C001/24; C09C003/08;  
H01F001/00E10; H01F001/00E10M; H01F001/37

AB A method of forming a plurality of monodisperse nanoparticles. Each of  
the nanoparticles comprises a nanocryst. inorg. core and at least one  
outer coating comprising an ionizable stabilizing material that  
substantially covers the core. The method comprises the steps of:  
combining a nonpolar aprotic organic solvent, an oxidant, and a 1st  
surfactant; providing at least one organometallic compound to the  
combined nonpolar aprotic organic solvent, oxidant, and 1st surfactant; and  
heating the combined nonpolar aprotic organic solvent, oxidant, 1st  
surfactant, and the at least one organometallic compound under an  
inert gas atmospheric to a 1st temperature in a range from .apprx.30° to  
.apprx.400° for a 1st time interval, thereby reacting at least one  
organometallic compound and the oxidant in the presence of the 1st  
surfactant and the nonpolar aprotic organic solvent to form a plurality of  
nanoparticles, each of the plurality of nanoparticles comprising a  
nanocryst. inorg. core and at least one outer coating comprising the 1st  
surfactant. At least one organometallic compound comprises a  
metal and at least one ligand.

ST cryst nanoparticle organometallic spinel ferrite pptn polymn  
surfactant coating; transition metal organometallic ligand  
crosslinking polymn initiator surfactant nanocryst

IT Epoxy group  
 (-containing surfactants; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Lactams  
 Lactones  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (-containing surfactants; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Unsaturated compounds  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (alkenyl, alkynyl, vinyl- containing surfactants; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Hydroperoxides  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkyl; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Amines, reactions  
 RL: CAT (Catalyst use); MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (also initiating and crosslinking group- containing surfactant; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Functional groups  
 (azo, initiator groups on surfactant; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (carbonyl complexes; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Aldehydes, reactions  
 Isocyanides  
 Phenols, reactions  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (crosslinking group on surfactant; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Ethers, reactions  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (cyclic, -containing surfactants; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Organometallic compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclooctadienyl, - group containing; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclopentadienyl, pentamethyl derivs.; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (cyclopentadienyl; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Crosslinking agents  
 (functional groups on surfactant; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT Esters, uses

RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
(halo, initiating group on surfactant; method of making crystalline  
nanoparticles from organometallic and transition metal  
complexes)

IT Amides, uses  
Ketones, uses  
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
(halo, initiator groups on surfactant; method of making crystalline  
nanoparticles from organometallic and transition metal  
complexes)

IT Amines, reactions  
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
reagent); USES (Uses)  
(heterocyclic, aziridine-containing surfactants; method of making  
crystalline  
nanoparticles from organometallic and transition metal  
complexes)

IT Peroxides, uses  
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
(initiating group on surfactant; method of making crystalline nanoparticles  
from organometallic and transition metal complexes)

IT Alkyl halides  
RL: CAT (Catalyst use); MOA (Modifier or additive use); RCT (Reactant);  
RACT (Reactant or reagent); USES (Uses)  
(initiator and crosslinking groups on surfactant; method of making  
crystalline nanoparticles from organometallic and transition metal  
complexes)

IT Aryl halides  
Nitroxides  
Thiocarbonyl compounds  
RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
(initiator groups on surfactant; method of making crystalline nanoparticles  
from organometallic and transition metal complexes)

IT Materials  
(inorg., core; method of making crystalline nanoparticles from  
organometallic and transition metal complexes)

IT Hydroxyl group  
(ionizable, initiating, and crosslinking groups on surfactant; method  
of making crystalline nanoparticles from organometallic and  
transition metal complexes)

IT Spinel-group minerals  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or  
reagent)  
(iron; method of making crystalline nanoparticles from  
organometallic and transition metal complexes)

IT Coating process  
Controlled atmospheres  
Heat treatment  
Nanocrystalline materials  
Nanoparticles  
Oxidizing agents  
Precipitation (chemical)  
Spinel-type crystals  
Surfactants  
(method of making crystalline nanoparticles from organometallic  
and transition metal complexes)

IT Noble gases, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(method of making crystalline nanoparticles from organometallic  
and transition metal complexes)

IT Spinel ferrites  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(method of making crystalline nanoparticles from organometallic

and transition metal complexes)

IT Amine oxides  
 Nitrosyl complexes  
 Peroxy acids  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (method of making crystalline nanoparticles from organometallic  
 and transition metal complexes)

IT Ligands  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (method of making crystalline nanoparticles from organometallic  
 and transition metal complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nitrosyls; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nitroxide complexes; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Solvents  
 (nonpolar; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Carbonyl group  
 (on organometallic compound; method of making crystalline  
 nanoparticles from organometallic and transition metal  
 complexes)

IT Solvents  
 (organic; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Phosphines  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organometallic complexes; method of making crystalline  
 nanoparticles from organometallic and transition metal  
 complexes)

IT Transition metal complexes  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (organometallic; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Polymerization catalysts  
 (photopolymer., functional groups on surfactant; method of  
 making crystalline nanoparticles from organometallic and  
 transition metal complexes)

IT Functional groups  
 (polymerizable, on surfactant head group; method of making crystalline  
 nanoparticles from organometallic and transition metal  
 complexes)

IT Carboxylic acids, reactions  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
 (salts, surfactant, and ionizable and crosslinking group- containing;  
 method of making crystalline nanoparticles from organometallic and  
 transition metal complexes)

IT Sulfonic acids, reactions  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
 (salts, surfactant; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Ketones, reactions  
 RL: CAT (Catalyst use); MOA (Modifier or additive use); NUU (Other use,  
 unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (solvent and also initiating and crosslinking groups on surfactant;  
 method of making crystalline nanoparticles from organometallic and  
 transition metal complexes)

IT Alcohols, reactions

RL: CAT (Catalyst use); NUU (Other use, unclassified); RCT (Reactant);  
 RACT (Reactant or reagent); USES (Uses)  
 (solvent and also surfactants containing functional groups; method of  
 making crystalline nanoparticles from organometallic and  
 transition metal complexes)

IT Thiols, reactions  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
 (surfactant, and ionizable and crosslinking group- containing; method of  
 making crystalline nanoparticles from organometallic and  
 transition metal complexes)

IT Phosphorus acids  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
 (surfactant; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Amine oxides  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (tertiary, at least one Me group; method of making crystalline nanoparticles  
 from organometallic and transition metal complexes)

IT Polymerization catalysts  
 (thermal, functional groups on surfactant; method of making crystalline  
 nanoparticles from organometallic and transition metal  
 complexes)

IT Nitroxides  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (transition metal complexes; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Carbonyl complexes  
 Nitrosyl complexes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (transition metal; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Organometallic compounds  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (transition metal; method of making crystalline nanoparticles from  
 organometallic and transition metal complexes)

IT Ligands  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 ( $\pi$ - acid, organometallic; method of making crystalline  
 nanoparticles from organometallic and transition metal  
 complexes)

IT 7440-48-4D, Cobalt, organic complexes  
 RL: CAT (Catalyst use); MOA (Modifier or additive use); USES (Uses)  
 (initiator groups on surfactant; method of making crystalline nanoparticles  
 from organometallic and transition metal complexes)

IT 143-07-7, Lauric acid, reactions 1184-78-7, Trimethylamine-N-oxide  
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or  
 reagent); USES (Uses)  
 (method of making crystalline nanoparticles from organometallic  
 and transition metal complexes)

IT 64-17-5, Ethanol, uses 67-63-0, Isopropyl alcohol, uses 112-60-7,  
 Tetraethylene glycol 115-10-6, Dimethyl ether 544-76-3, Hexadecane  
 629-82-3, Dioctyl ether 1116-76-3, Trioctylamine  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (method of making crystalline nanoparticles from organometallic  
 and transition metal complexes)

IT 12052-28-7P, Cobalt iron oxide (CoFe<sub>2</sub>O<sub>4</sub>) 12063-10-4P, Manganese iron  
 oxide (MnFe<sub>2</sub>O<sub>4</sub>)  
 RL: PRP (Properties); PUR (Purification or recovery); SPN (Synthetic  
 preparation); PREP (Preparation)  
 (method of making crystalline nanoparticles from organometallic  
 and transition metal complexes)

IT 1332-37-2P, Iron oxide, reactions

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT 7439-89-6D, Iron, organometallic complexes 7439-96-5D, Manganese, organometallic complexes 7439-98-7D, Molybdenum, organometallic complexes 7440-02-0D, Nickel, organometallic complexes 7440-32-6D, Titanium, organometallic complexes 7440-43-9D, Cadmium, organometallic complexes 7440-47-3D, Chromium, organometallic complexes 7440-48-4D, Cobalt, organometallic complexes 7440-50-8D, Copper, organometallic complexes 7440-54-2D, Gadolinium, organometallic complexes 7440-62-2D, Vanadium, organometallic complexes 7440-65-5D, Yttrium, organometallic complexes 7440-66-6D, Zinc, organometallic complexes 7782-44-7, Oxygen, reactions 10024-97-2, Nitrous oxide, reactions 10170-69-1, Manganese carbonyl (Mn<sub>2</sub>(CO)<sub>10</sub>) 10210-68-1, Cobalt carbonyl (Co<sub>2</sub>(CO)<sub>8</sub>) 13463-40-6, Iron carbonyl (Fe(CO)<sub>5</sub>)

RL: RCT (Reactant); RACT (Reactant or reagent)  
(method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT 1317-61-9P, Iron oxide (Fe<sub>3</sub>O<sub>4</sub>), properties

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(phase in mixed iron oxide spinel; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT 6303-21-5D, Phosphinic acid, organic derivs. 13598-36-2D, Phosphonic acid, organic derivs.

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(surfactant; method of making crystalline nanoparticles from organometallic and transition metal complexes)

IT 1309-37-1P, Iron oxide (Fe<sub>2</sub>O<sub>3</sub>), properties

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(γ-, phase in mixed iron oxide spinel; method of making crystalline nanoparticles from organometallic and transition metal complexes)

L16 ANSWER 13 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

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TI Novel methods and compositions for improved electrophoretic display performance

IN Wu, Zarnig-arh George; Haubrich, Jeanne E.; Wang, Xiaojia; Liang, Rong-chang

PA Sipix Imaging, Inc., USA

SO PCT Int. Appl., 38 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM G02F001-00

CC 48-7 (Unit Operations and Processes)

Section cross-reference(s): 29, 35, 38, 74, 76

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	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004010206	A2	20040129	WO 2003-US21681	20030710
	WO 2004010206	A3	20040408		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,			



PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,  
 TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CN 1469177 A 20040121 CN 2002-153622 20021127  
 AU 2003249041 A1 20040209 AU 2003-249041 20030710  
 EP 1529242 A2 20050511 EP 2003-765534 20030710

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

JP 2005533289 T 20051104 JP 2004-523103 20030710

PRAI US 2002-396680P P 20020717  
 WO 2003-US21681 W 20030710

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2004010206	ICM	G02F001-00
	IPCI	G02F0001-00 [ICM,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
CN 1469177	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]; G09F0009-37 [ICS,7]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
AU 2003249041	IPCI	G02F0001-00 [ICM,7]
EP 1529242	IPCI	G02F0001-167 [ICM,7]; G02F0001-01 [ICM,7,C*]
	IPCR	G02F0001-01 [I,C*]; G02F0001-167 [I,A]; G02F0001-17 [I,A]
	ECLA	G02F001/167
JP 2005533289	IPCI	G02F0001-167 [ICM,7]; G02F0001-17 [ICS,7]; G02F0001-01 [ICS,7,C*]

AB The invention is directed to novel methods and compns. useful for improving the performance of electrophoretic displays. The methods comprise adding a high absorbance dye or pigment, or conductive particles or a charge transport material into an electrode protecting layer of the display.

ST electrophoretic display dye pigment conducting particle polymer sealant adhesive; electrophotog photoconductor photoreceptor coated electrode metal complex oxide organometallic

IT Oxidation potential  
 (<1.4 V (vs. SCE) for hole transport materials; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoalkanes  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (C7-10; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Cyanine dyes  
 (Naphthalo, metal complexes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT UV absorption  
 (UV-visible, of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbon black, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (Vulcan XC-72, composite sealant with Kraton G-R 6919 and Kraton G

1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, processes  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent) (acrylates, Ebecryl 1360; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polysiloxanes, uses  
 RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (acrylates, microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ketones, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (alkadienyl; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitriles, uses  
 Nitro compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (and oligomers and polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Amines, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (aromatic; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isoprene-styrene rubber  
 Polymers, uses  
 Styrene-butadiene rubber, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Synthetic rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (butadiene-isoprene-styrene; hydrogenated, block, composite sealant with Kraton G 1650 and Carb-O-Sil or carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (cobalt; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Acrylic polymers, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (cyano-containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Isocyanates  
 RL: DEV (Device component use); TEM (Technical or engineered material

use); USES (Uses)

(di- and poly- monomers, polymers containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Adhesives

Coating materials

Crosslinking

Dyes

Electric conductors

Electrodes

Electrophotographic apparatus

Electrophotographic photoconductors (photoreceptors)

Embossing

Lamination

Pigments, nonbiological

Sealing compositions

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Thermoplastic rubber

RL: DEV (Device component use); SPN (Synthetic preparation); TEM

(Technical or engineered material use); PREP (Preparation); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alkadienes

Enamines

Epoxy resins, uses

Hydrazones

Metals, uses

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Diazo compounds

Metallophthalocyanines

Metalloporphyrins

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)

(dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Oxides (inorganic), uses

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(elec. conductive; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Carbonaceous materials (technological products)

RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(elec. conductor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Optical imaging devices

(electrophoretic; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyurethanes, uses

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(encapsulated TiO<sub>2</sub>; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polyesters, processes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (film coated with ITO; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (hydrogenated, block, triblock, Kraton G 1650, composite with Kraton G-R 6919/Carb-O-Sil or Carbon black; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Engineering  
 (inventions; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
 (mono- and multifunctional oligomers and polymers containing; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Azo dyes  
 (monoazo, diazo, and polyazo; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Allylic compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (multifunctional monomers, polymers of; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (nickel, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Heterocyclic compounds  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (nitrogen, five-membered, triazoles; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Alloys, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (nonferrous; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT IR absorption  
 (of dyes and pigments; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Electrophoresis apparatus  
 (optical imaging; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Polymerization  
 (photopolymer.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Transition metal complexes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (phthalocyanine, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vinyl compounds, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (polymers, from multifunctional monomers; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Vanadyl complexes  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (porphyrin, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (thermoplastics; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Epoxides  
 Polyamides, reactions  
 Polycarbonates, reactions  
 Polyesters, reactions  
 Polyethers, reactions  
 Polyurethanes, reactions  
 Polyvinyl butyrals  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
 (thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Plastics, uses  
 RL: DEV (Device component use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (thermosetting; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metallophthalocyanines  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (transition metal complexes, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Metalloporphyrins  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (vanadyl, dyes; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Nitrile rubber, processes  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions.  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
 (vinyl, polymers, oligomers and polymers containing, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and

adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT Ethers, reactions  
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
 (vinyl, thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9, Ebecryl 600  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (Bisphenol A-containing diacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 13048-33-4, 1,6-Hexanediol diacrylate  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (HDODA; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 75081-21-9, ITX  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (ITX; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 50926-11-9, Indium tin oxide  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (PET film coated with; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 60506-81-2, SR 399  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (a tetraacrylate; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 41484-35-9, Irganox 1035  
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (bis (hindered phenol thioether); dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 138184-94-8, Cab-O-Sil TS 720  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (composite sealant with Kraton G-R 6919 and Kraton G 1650; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 65181-78-4, N,N'-Bis(3-methylphenyl)-N-N'-diphenylbenzidine  
 RL: DEV (Device component use); USES (Uses)  
 (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12227-55-3, Orasol Red BL 12237-23-9, Orasol Black CN 61931-55-3, Orasol Yellow 2GLN  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 56996-93-1, Sudan Black 61901-87-9, Orasol Black RLI 71799-11-6, Orasol Blue GL  
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
 (dye, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 14916-87-1, FC 3275  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
 (dye; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 77-58-7, Dibutyltin dilaurate  
 RL: CAT (Catalyst use); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 78-93-3, Methyl ethyl ketone, uses  
 RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 147-14-8D, Copper phthalocyanine, derivs. 7429-90-5D, Aluminum, phthalocyanine or naphthalocyanine complexes 7439-89-6D, Iron, phthalocyanine or naphthalocyanine complexes 7439-92-1D, Lead, phthalocyanine or naphthalocyanine complexes 7439-95-4, Magnesium, processes 7440-02-0D, Nickel, naphthalocyanine derivs. complexes 7440-31-5D, Tin, phthalocyanine or naphthalocyanine complexes 7440-32-6D, Titanium, naphthalocyanine derivs. complexes 7440-43-9D, Cadmium, phthalocyanine or naphthalocyanine complexes 7440-48-4D, Cobalt, naphthalocyanine derivs. complexes 7440-62-2D, Vanadium, phthalocyanine or naphthalocyanine complexes 7440-66-6D, Zinc, phthalocyanine or naphthalocyanine complexes 7440-74-6D, Indium, phthalocyanine or naphthalocyanine complexes 78675-98-6D, Squaraine, derivs.  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-42-3, Poly(ethyl methacrylate)  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 (dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 74-82-8D, Methane, triaryl derivs. 81-33-4 85-83-6, Sudan IV 85-86-9, Sudan III 86-74-8D, Carbazole, derivs. 92-52-4D, Biphenyl, derivs. 129-79-3, 2,4,7-Trinitro-9-fluorenone 288-42-6D, Oxazole, derivs. 288-99-3D, 1,3,4-Oxadiazole, 2,5-bis(4-N,N'-dialkylaminophenyl) 486-25-9, Fluorenone 486-25-9D, Fluorenone, oligomers and polymers of 809-73-4 842-07-9, Sudan yellow 966-88-1D, Benzaldehyde-N,N-diphenylhydrazone, p-dialkylamino derivs. 1159-53-1 1229-55-6, Sudan R 1450-63-1, 1,1,4,4-Tetraphenylbutadiene 1484-96-4 1518-16-7 2085-33-8 2417-00-7 2455-14-3 2491-91-0, 2,5-Bis(4-methylphenyl)-1,3,4-oxadiazole 3118-97-6, Sudan II 4197-25-5, Sudan Black B 5152-94-3 7429-90-5, Aluminum, uses 7429-90-5D, Aluminum, alloys 7439-89-6, Iron, uses 7439-89-6D, Iron, alloys 7440-02-0D, Nickel, alloys 7440-22-4, Silver, uses 7440-22-4D, Silver, alloys 7440-50-8, Copper, uses 7440-50-8D, Copper, alloys 7440-57-5, Gold, uses 7440-57-5D, Gold, alloys 7440-74-6, Indium, uses 7440-74-6D, Indium, alloys 7782-42-5, Graphite, uses 9003-39-8, Polyvinylpyrrolidone

9003-55-8, Styrene-butadiene copolymer 11120-54-0D, Oxadiazole, derivs.  
 12673-86-8, Antimony tin oxide 14705-63-6 14705-63-6D, alkylated and  
 alkoxyated derivs. 14752-00-2 15546-43-7, N,N,N',N'-  
 Tetraphenylbenzidine 20441-06-9 23467-27-8 24937-78-8,  
 Ethylene-vinyl acetate copolymer 26009-24-5, Poly(p-phenylene vinylene)  
 33200-26-9 35079-58-4 35458-94-7 36118-45-3D, Pyrazoline, Ph  
 dialkylaminostyrene dialkylaminophenyl derivs. 36118-45-3D, Pyrazoline,  
 derivs. 41584-66-1 43134-09-4 51325-95-2 58280-31-2 58328-31-7,  
 4,4'-Bis(carbazol-9-yl)biphenyl 58473-78-2 59765-31-0 59869-79-3  
 69361-50-8D, bis(4-N,N-dialkylamino) 75232-44-9 76185-65-4  
 82532-76-1 83992-95-4 85171-94-4 89114-90-9 89114-91-0  
 89991-16-2 93376-18-2, (4-Butoxycarbonyl-9-fluorenylidene)malononitrile  
 93975-08-7 93975-09-8 94665-89-1 95270-88-5, Polyfluorene  
 95993-52-5 96492-45-4 97671-90-4 103079-11-4 105389-36-4,  
 4,4',4''-Tris(N,N-diphenylamino)triphenylamine 117944-65-7, Indium zinc  
 oxide 123847-85-8 126213-51-2, Poly(3,4,-ethylenedioxythiophene)  
 127022-77-9, Hexakis(benzylthio)benzene 138171-14-9 138372-67-5  
 139092-78-7 139255-17-7 141752-82-1 142289-08-5 150405-69-9  
 154896-84-1 164534-25-2 174493-15-3 182507-83-1 184101-39-1  
 185690-39-5, 4,4',4''-Tris[N-(1-naphthyl)-N-phenylamino]triphenylamine  
 203799-76-2 254435-83-1, Sudan Blue 376386-75-3 482654-95-5  
 649735-34-2 649735-35-3 649735-37-5D, 2,5-bis(4-dialkylaminophenyl)  
 derivs. 649735-38-6 650609-45-3 650609-46-4 650609-47-5  
 650609-48-6

RL: DEV (Device component use); TEM (Technical or engineered material  
 use); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting  
 polymer components and novel methods and compns. for improved  
 electrophoretic display performance)

IT 68-12-2, Dimethylformamide, uses 108-21-4, Isopropyl acetate 108-88-3,  
 Toluene, uses 110-54-3, Hexane, uses 141-78-6, Ethyl acetate, uses  
 RL: NUU (Other use, unclassified); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting  
 polymer components and novel methods and compns. for improved  
 electrophoretic display performance)

IT 650634-86-9, Duro-Tak 1105

RL: PEP (Physical, engineering or chemical process); PYP (Physical  
 process); TEM (Technical or engineered material use); PROC (Process); USES  
 (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and conducting  
 polymer components and novel methods and compns. for improved  
 electrophoretic display performance)

IT 6712-98-7 15625-89-5, Trimethylolpropane triacrylate 165169-07-3,  
 Desmodur N 3400 601484-87-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(dyes, pigments, crosslinking sealants and adhesives, and conducting  
 polymer components and novel methods and compns. for improved  
 electrophoretic display performance)

IT 198-55-0, Perylene 488-86-8D, Croconic acid, amine derivs. 3317-67-7,  
 Cobalt phthalocyanine 12226-78-7, C.I.Solvent Blue 67 14055-02-8D,  
 Nickel phthalocyanine, derivs. 14172-92-0, Nickel tetraphenylporphine  
 33273-09-5D, derivs. 52324-93-3, Titanium phthalocyanine

RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PYP (Physical process); PROC (Process); USES (Uses)

(dyes, pigments, crosslinking sealants and adhesives, and  
 conducting polymer components and novel methods and compns. for  
 improved electrophoretic display performance)

IT 650609-44-2P

RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); PYP (Physical process); SPN (Synthetic preparation); PREP  
 (Preparation); PROC (Process); USES (Uses)

(electrophoretic TiO<sub>2</sub> encapsulant; dyes, pigments, crosslinking  
 sealants and adhesives, and conducting polymer components and novel  
 methods and compns. for improved electrophoretic display performance)

IT 13463-67-7, R900, uses



RL: DEV (Device component use); USES (Uses)  
(encapsulated with electrophoretic polymer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 25038-59-9, PET, processes  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(film coated with ITO; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 119313-12-1, Irgacure 369  
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)  
(initiator; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 105729-79-1 700836-36-8  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(isoprene-styrene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 7440-02-0, Nickel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(microcup base template; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 4687-94-9DP, Ebecryl 600, polymers containing 13048-33-4DP, HDDA, polymers containing 15625-89-5DP, TMPTA, polymers containing 60506-81-2DP, SR 399, polymers containing  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(microcup polymer, laminated with primer-coated ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 9003-18-3  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(nitrile rubber, vinyl group-terminated, Hycar 1300-43; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 12047-27-7, K-Plus 16, uses  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(pigment, in Duro-Tak adhesive layer; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 115452-84-1, Disperbyk 163  
RL: MOA (Modifier or additive use); USES (Uses)  
(polymeric dispersant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 649735-33-1P  
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(primer coating for ITO/PET film; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 106107-54-4 694491-73-1  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(styrene-butadiene rubber, block, triblock; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 53568-48-2, Disperse-Ayd 6

RL: MOA (Modifier or additive use); USES (Uses)

(surfactant; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 79-10-7D, Acrylic acid, multifunctional and multi- esters, oligomers and polymers containing 79-10-7D, Acrylic acid, multifunctional esters 79-41-4D, Methacrylic acid, multifunctional and multi- esters, oligomers and polymers containing 79-41-4D, Methacrylic acid, multifunctional esters 100-42-5D, Styrene, derivs. 100-42-5D, Styrene, oligomers and polymers containing 9003-01-4D, Polyacrylic acid, alkyl esters 9004-36-8, Cellulose acetate butyrate 25087-26-7D, Polymethacrylic acid, alkyl esters  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(thermoset or thermoplastic precursor; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

IT 477290-74-7, Galden HT 200

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(tri-hydric amino alc.; dyes, pigments, crosslinking sealants and adhesives, and conducting polymer components and novel methods and compns. for improved electrophoretic display performance)

L16 ANSWER 14 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:525870 CAPLUS

DN 139:92751

ED Entered STN: 10 Jul 2003

TI Light-sensitive composition containing specific intercalation compound for manufacturing printed circuit boards

IN Tamura, Kenji; Hirata, Motoyuki; Kanamaru, Yoshikazu

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-004

ICS G03F007-027; G03F007-032; H05K003-28

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003195486	A	20030709	JP 2001-395572	20011227
PRAI	JP 2001-395572		20011227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003195486	ICM	G03F007-004
	ICS	G03F007-027; G03F007-032; H05K003-28
	IPCI	G03F0007-004 [ICM,7]; G03F0007-027 [ICS,7]; G03F0007-032 [ICS,7]; H05K0003-28 [ICS,7]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-032 [I,C*]; G03F0007-032 [I,A]; H05K0003-28 [I,C*]; H05K0003-28 [I,A]

AB The title composition contains a compound having ethylenic unsatd. groups, an epoxy resin, a photopolymn. initiator, and an intercalation compound, wherein the intercalation compound contains a thermal polymerization catalyst chosen from amine, a quaternary ammonium salt, acid anhydride,

polyamide, N-containing heterocyclic compound, and organometallic compound in an inorg. layer-structured compound The composition shows the good properties for pattern formation and provides the layer having good insulative protective layers and showing good flexibility.

ST light compn intercalation printed circuit

IT Polyurethanes, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (acrylates; light-sensitive composition for manufacturing printed circuit boards)

IT Quaternary ammonium compounds, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (coco alkylbis(hydroxyethyl)methyl, ethoxylated, chlorides; intercalation compound in composition)

IT Phenolic resins, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (epoxy, novolak, reaction product with acrylic acid and dibasic acid; light-sensitive composition for manufacturing printed circuit boards)

IT Dielectric films  
 Light-sensitive materials  
 Photoresists  
 Printed circuit boards  
 (light-sensitive composition for manufacturing printed circuit boards)

IT Epoxy resins, preparation  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (phenolic, novolak, reaction product with acrylic acid and dibasic acid; light-sensitive composition for manufacturing printed circuit boards)

IT 90-93-7, EAB F 75980-60-8, Chivacure TPO 119313-12-1, Irgacure 369  
 RL: CAT (Catalyst use); USES (Uses)  
 (epoxy resin in composition)

IT 90837-23-3, YL 6121 143549-97-7, Ebecryl 1290K 154636-26-7, EPPN 502H  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (epoxy resin in composition)

IT 108-78-1D, Melamine, salt withhydrogen chloride 120668-89-5, Sumecton SA 182636-27-7, Somasif ME 100  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (intercalation compound in composition)

IT 79-10-7DP, Acrylic acid, reaction product with phenol novolak epoxy resin and dibasic acid 1687-30-5DP, Hexahydrophthalic acid, reaction product with phenol novolak epoxy resin and acrylic acid 71036-23-2P, PTG 850SN-Dimethylolpropionic acid-Isophorone diisocyanate-2-hydroxyethyl acrylate copolymer 554449-67-1P, Placel 208-Dimethylolpropionic acid-Isophorone diisocyanate-2-hydroxyethyl acrylate copolymer  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (light-sensitive composition for manufacturing printed circuit boards)

L16 ANSWER 15 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:453689 CAPLUS

DN 139:292509

ED Entered STN: 13 Jun 2003

TI Harvesting the fields of inorganic and organometallic photochemistry for new photoinitiators

AU Kutal, Charles; Yamaguchi, Yoshikazu; Ding, Wei; Sanderson, Cynthia T.; Li, Xinyong; Gamble, Gary; Amster, I. Jonathan

CS Department of Chemistry, University of Georgia, Athens, GA, 30602, USA

SO ACS Symposium Series (2003), 847(Photoinitiated Polymerization), 332-350  
 CODEN: ACSMC8; ISSN: 0097-6156

PB American Chemical Society

DT Journal; General Review

LA English

CC 35-0 (Chemistry of Synthetic High Polymers)

AB A review. Several iron(II) metallocenes are effective photoinitiators for

ionic polymerization reactions. Photoexcitation of ferrocene and 1,1'-dibenzoyl-ferrocenes in solns. of Et  $\alpha$ -cyanoacrylate produces anionic species that initiate polymerization of the electrophilic monomer. Irradiation of [Cp Fe( $\eta$ 6-arene)]<sup>+</sup> (Cp is  $\eta$ 5-C5H5) in epoxide-containing media generates several cationic species capable of initiating ring-opening polymerization. The diversity of photoinitiation mechanisms exhibited by these iron(II) metallocenes is discussed in terms of their electronic structures.

- ST review metallocene catalyst photoinitiator ionic polymn electronic structure
- IT Electronic structure  
(inorg. and organometallic photochem. for new photoinitiators)
- IT Epoxides  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
(inorg. and organometallic photochem. for new photoinitiators)
- IT Polymerization  
(ionic; inorg. and organometallic photochem. for new photoinitiators)
- IT Polymerization catalysts  
(metallocene; inorg. and organometallic photochem. for new photoinitiators)
- IT Polymerization  
(photopolymn.; inorg. and organometallic photochem. for new photoinitiators)
- IT Polymerization  
(ring-opening; inorg. and organometallic photochem. for new photoinitiators)
- IT 15438-31-0D, metallocene compds., uses  
RL: CAT (Catalyst use); USES (Uses)  
(inorg. and organometallic photochem. for new photoinitiators)
- IT 102-54-5, Ferrocene 7085-85-0, Ethyl  $\alpha$ -cyanoacrylate 12180-80-2, 1,1'-Dibenzoylferrocene  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalyst; inorg. and organometallic photochem. for new photoinitiators)

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L16 ANSWER 16 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:433022 CAPLUS

DN 139:7887

ED Entered STN: 06 Jun 2003

TI Photocurable resin compositions for forming fine patterns of optical instruments and their uses

IN Hojo, Mikiko

PA Dai Nippon Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03H001-02

ICS B29C039-10; C08F290-06; C08J007-04; G02B005-18; G02B005-32;  
 G03H001-18; G03H001-20; B29L011-00; C08L101-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73, 74

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003162205	A	20030606	JP 2002-149003	20020523
	US 2003129385	A1	20030710	US 2002-178189	20020624
PRAI	JP 2001-280546	A	20010914		
	JP 2001-197412	A	20010628		
	JP 2001-280545	A	20010914		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003162205	ICM	G03H001-02
	ICS	B29C039-10; C08F290-06; C08J007-04; G02B005-18; G02B005-32; G03H001-18; G03H001-20; B29L011-00; C08L101-00
	IPCI	G03H0001-02 [ICM,7]; B29C0039-10 [ICS,7]; C08F0290-06 [ICS,7]; C08F0290-00 [ICS,7,C*]; C08J0007-04 [ICS,7]; C08J0007-00 [ICS,7,C*]; G02B0005-18 [ICS,7]; G02B0005-32 [ICS,7]; G03H0001-18 [ICS,7]; G03H0001-20 [ICS,7]; B29L0011-00 [ICS,7]; C08L0101-00 [ICS,7]
	IPCR	G02B0005-18 [I,C*]; G02B0005-18 [I,A]; B29C0039-10 [I,C*]; B29C0039-10 [I,A]; B29L0011-00 [N,A]; C08F0290-00 [I,C*]; C08F0290-06 [I,A]; C08J0007-00 [I,C*]; C08J0007-04 [I,A]; G02B0005-32 [I,C*]; G02B0005-32 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]; G03H0001-18 [I,C*]; G03H0001-18 [I,A]; G03H0001-20 [I,C*]; G03H0001-20 [I,A]
US 2003129385	IPCI	B29C0049-00 [ICM,7]
	IPCR	B29C0035-08 [N,A]; B29C0035-08 [N,C*]; B29C0059-04 [I,A]; B29C0059-04 [I,C*]; B29C0067-24 [N,A]; B29C0067-24 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]
	NCL	428/323.000; 264/284.000
	ECLA	B29C059/04L; B29D017/00C

AB The compns., useful for holograms, diffraction gratings, antireflective films, optical diffusers, optical reflectors, etc., comprise (A) binder polymers containing (a) acrylic polymers and (b)

photocurable functional group-containing urethane acrylates and/or polyester acrylates and (B) organometal coupling agents. Thus, a composition containing 2-hydroxyethyl methacrylate-isobornyl methacrylate-Me methacrylate copolymer 75, Shikoh UV 1700B (urethane acrylate) 25, X 21-5766 (trimethylsiloxysilicic acid-containing methylpolysiloxane) 1, and Irgacure 907 (photopolymer. catalyst) 4 parts was mixed with 5% ALCH TR (aluminum chelate), applied on a Lumirror 50T85S (PET) film, and dried to give an antiblocking sheet with surface roughness 1.304 nm, which was embossed and irradiated with UV to give clear fine patterns.

- ST urethane acrylate polymer polysiloxane mold release agent; hydroxyethyl methacrylate isobornyl Me polymer optical instrument; hologram diffraction grating antireflective film acrylic polyurethane; optical reflector diffuser photocurable resin fine pattern; aluminum chelate organometallic antiblocking coupling agent
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(Lumirror 50T85S, substrate film; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Polysiloxanes, uses  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(Me, trimethylsiloxysilicic acid-containing, mold release agent; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acrylate-terminated; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Polyurethanes, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acrylic; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Organometallic compounds  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(coupling agents; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Optical instruments  
(diffusers; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Parting materials  
(mold-release agents; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Coupling agents  
(organometallic; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Antiblocking agents  
Antireflective films  
Diffraction gratings  
Optical instruments  
Optical recording materials  
Optical reflectors  
Transfers  
(photocurable resin compns. for forming fine patterns of optical instruments)
- IT Acrylic polymers, uses  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(polyurethane-; photocurable resin compns. for forming fine patterns of optical instruments)
- IT Holography  
(relief hologram; photocurable resin compns. for forming fine patterns of optical instruments)
- IT 9011-14-7, PMMA

RL: TEM (Technical or engineered material use); USES (Uses)  
 (BR 85, BR 88; photocurable resin compns. for forming fine patterns of optical instruments)

IT 25038-59-9, Poly(ethylene terephthalate), uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (Lumirror 50T85S, substrate film; photocurable resin compns. for forming fine patterns of optical instruments)

IT 14782-75-3 15306-17-9, ALCH TR  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (coupling agent; photocurable resin compns. for forming fine patterns of optical instruments)

IT 7429-90-5D, Aluminum, chelates  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (coupling agents; photocurable resin compns. for forming fine patterns of optical instruments)

IT 125935-73-1, Shikoh UV 1700B  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (crosslinked; photocurable resin compns. for forming fine patterns of optical instruments)

IT 263006-99-1, X 21-3056 533937-61-0, X 21-5766  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (mold release agent; photocurable resin compns. for forming fine patterns of optical instruments)

IT 501917-98-2P, 2-Hydroxyethyl methacrylate-isobornyl methacrylate-methyl methacrylate copolymer  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (photocurable resin compns. for forming fine patterns of optical instruments)

L16 ANSWER 17 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:376092 CAPLUS  
 DN 138:376485  
 ED Entered STN: 16 May 2003  
 TI System and method for the holographic deposition of material  
 IN Rosenberger, Brian T.; Carra, William M.  
 PA USA  
 SO U.S. Pat. Appl. Publ., 15 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 IC ICM G03H001-00  
 ICS G02B005-32  
 INCL 359015000; 359001000  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003090752	A1	20030515	US 2001-10506	20011113
	WO 2002088848	A2	20021107	WO 2001-US43556	20011114
	WO 2002088848	A3	20030828		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	AU 2001297761	A1	20021111	AU 2001-297761	20011114
	EP 1358058	A2	20031105	EP 2001-273989	20011114

EP 1358058 B1 20060816

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI US 2000-249678P P 20001117  
US 2001-10506 A 20011113  
WO 2001-US43556 W 20011114

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003090752	ICM	G03H001-00
	ICS	G02B005-32
	INCL	359015000; 359001000
	IPCI	G03H0001-00 [ICM,7]; G02B0005-32 [ICS,7]
	IPCR	B29C0067-00 [I,C*]; B29C0067-00 [I,A]
	NCL	359/015.000; 359/001.000
	ECLA	B29C067/00L
WO 2002088848	IPCI	B29C0067-00 [ICM,7]; G03H0003-00 [ICS,7]
	IPCR	G02B0027-18 [I,C*]; G02B0027-18 [I,A]; B29C0067-00 [I,C*]; B29C0067-00 [I,A]; G03H0001-00 [I,C*]; G03H0001-22 [I,A]
	ECLA	B29C067/00L
AU 2001297761	IPCI	B29C0067-00 [ICS,7]; G03H0003-00 [ICS,7]
	IPCR	G02B0027-18 [I,C*]; G02B0027-18 [I,A]; B29C0067-00 [I,C*]; B29C0067-00 [I,A]; G03H0001-00 [I,C*]; G03H0001-22 [I,A]
EP 1358058	IPCI	B29C0067-00 [I,C]; B29C0067-00 [I,A]
	IPCR	G02B0027-18 [I,C*]; G02B0027-18 [I,A]; B29C0067-00 [I,C*]; B29C0067-00 [I,A]; G03H0001-00 [I,C*]; G03H0001-22 [I,A]
	ECLA	B29C067/00L

AB An apparatus and method for hologram induced deposition of material for use in the formation of three-dimensional structures is described. An electromagnetic energy source may be directed in the form of a hologram to a process chamber with a medium. The medium may be an organometallic gaseous medium. The hologram may induce the medium to form a solid structure associated with the shape of the hologram. The pressure of the gaseous medium may range from subatmospheric to greater than 100 psi. Alternatively, the medium may be a liquid polymer, a solid particle, or others. The hologram may be formed with an LCD panel or other means. Further, a holog. movie may be projected into one or more mediums to form complex three-dimensional structures.

ST holog deposition material microstructure fabrication

IT Micromachines

(microelectromech. devices; system and method for holog. deposition of material for formation of three-dimensional structures)

IT Holography

Micromachining

Stereolithography

(system and method for holog. deposition of material for formation of three-dimensional structures)

L16 ANSWER 18 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:214751 CAPLUS

DN 138:245586

ED Entered STN: 19 Mar 2003

TI Photocurable resin compositions for forming fine patterns of optical products, their fine pattern-transfer foils, and stampers for patterning

IN Hojo, Mikiko; Yoshihara, Toshio

PA Dai Nippon Printing Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F299-00



ICS C08F290-12; G02B005-18; G02B005-32; G03F007-004; G03H001-02;  
G03H001-20

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 38, 73

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003082043	A	20030319	JP 2002-154630	20020528
	US 2003129385	A1	20030710	US 2002-178189	20020624
PRAI	JP 2001-197412	A	20010628		
	JP 2001-280545	A	20010914		
	JP 2001-280546	A	20010914		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003082043	ICM	C08F299-00
	ICS	C08F290-12; G02B005-18; G02B005-32; G03F007-004; G03H001-02; G03H001-20
	IPCI	C08F0299-00 [ICM,7]; C08F0290-12 [ICS,7]; C08F0290-00 [ICS,7,C*]; G02B0005-18 [ICS,7]; G02B0005-32 [ICS,7]; G03F0007-004 [ICS,7]; G03H0001-02 [ICS,7]; G03H0001-20 [ICS,7]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C08F0290-00 [I,C*]; C08F0290-12 [I,A]; C08F0299-00 [I,C*]; C08F0299-00 [I,A]; G02B0005-18 [I,C*]; G02B0005-18 [I,A]; G02B0005-32 [I,C*]; G02B0005-32 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]; G03H0001-20 [I,C*]; G03H0001-20 [I,A]
US 2003129385	IPCI	B29C0049-00 [ICM,7]
	IPCR	B29C0035-08 [N,A]; B29C0035-08 [N,C*]; B29C0059-04 [I,A]; B29C0059-04 [I,C*]; B29C0067-24 [N,A]; B29C0067-24 [N,C*]; B29D0017-00 [I,A]; B29D0017-00 [I,C*]
	NCL	428/323.000; 264/284.000
	ECLA	B29C059/04L; B29D017/00C

AB The compns. showing good conformity to cavity shapes of stampers, etc.,  
and good shape retention after patterning contain (A)  
photopolymerizable functional group-containing binder resins and (B)  
ultrafine inorg. particles of submicron-order size, which can be dispersed  
in diluent solvents as colloids to prepare coating liqs. The particles may  
have long and slender structure or globular structure and may have  
hydrophobic surfaces. Preferably, the binder resins comprise acrylic  
resins, urethane acrylate resins, and/or polyester acrylates. Preferably,  
the compns. further contain photopolymerizable functional  
group-containing monomers or oligomers, mold-releasing agents, and  
organometallic coupling agents. The foil has on a support a fine  
pattern-forming layer which can be transfered. Preferably, the foil  
consists of a support, a releasing layer, the fine pattern-forming layer,  
an opaque reflection layer or a transparent reflection layer having a  
refractive index different from that of the fine pattern-forming layer,  
and an adhesive layer laminated in this order. The optical product has a  
fine-patterned surface structure comprising the cured product of the  
photocurable resin compns. The fine patterns may be relief-type  
hologram or diffraction grating. The fine patterns may be an  
optical device which controls reflection, transmission, scattering,  
polarizing, light-gathering, and/or interference. The fine patterns may  
have a structure for information recording. The stamper has a surface  
structure having patterns which complement with the fine patterns of the  
optical products and are made from cured products of the photocurable  
resin compns. In the pattern formation, the foil is employed as a pattern  
receptor and is subjected to stamping by using the stamper which is then  
removed, then the provided patterns are cured and will be subsequently  
transfered to a 2nd support.

ST photocurable resin compn inorg ultrafine particle patterning; optical

device fine pattern prep transfer; relief hologram photocurable resin compn patterning; diffraction grating photocurable resin compn patterning; stamper photocurable resin compn inorg ultrafine particle

IT Polysiloxanes, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (amino, KF 860, releasing agent; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT Organometallic compounds  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (coupling agents; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT Coupling agents  
 (organometallic; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT Diffraction gratings  
 Embossing  
 Optical instruments  
 Optical recording materials  
 Photoimaging materials  
 (photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT Holography  
 (relief hologram; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 125935-73-1, Shikoh UV 1700B  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (Shikoh UV 1700B; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 15306-17-9, ALCH-TR  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (coupling agent; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 9011-14-7, Dianal BR 85  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (nonpolymerizable binder; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 30674-80-7DP, Karenz MOI, reaction products with 2-hydroxymethyl methacrylate-isobornyl methacrylate-Me methacrylate copolymer  
 501917-98-2DP, 2-Hydroxyethyl methacrylate-isobornyl methacrylate-methyl methacrylate copolymer, reaction products with 2-isocyanatoethyl methacrylate  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 7631-86-9, Silica, uses  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

IT 7534-94-3, SR 423 60506-81-2, SR 399 77641-99-7, Kayarad DPHA  
 133975-88-9, Aronix M 9050 298700-88-6, Shikoh UV 3520TL  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)  
 IT 97917-34-5, KF 8012 259187-10-5, KF 7312 263006-99-1, X 21-3056  
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
 (releasing agent; photocurable resin compns. for forming fine patterns of optical products by stamping and pattern transfer and stampers for patterning)

L16 ANSWER 19 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2002:611748 CAPLUS  
 DN 137:177173  
 ED Entered STN: 16 Aug 2002  
 TI Photosensitive composition for volume hologram recording and photosensitive medium for volume hologram recording  
 IN Otaki, Hiroyuki; Yoshihara, Toshio  
 PA Dai Nippon Printing Co., Ltd., Japan  
 SO Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03F007-00  
 ICS G03F007-075; C08G077-442; C08L083-10  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1231511	A2	20020814	EP 2002-250839	20020207
	EP 1231511	A3	20030305		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002236439	A	20020823	JP 2001-33716	20010209
	JP 2002236440	A	20020823	JP 2001-33717	20010209
	JP 2003043903	A	20030214	JP 2001-232068	20010731
	US 2002110740	A1	20020815	US 2002-72201	20020207
PRAI	JP 2001-33716	A	20010209		
	JP 2001-33717	A	20010209		
	JP 2001-232068	A	20010731		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1231511	ICM	G03F007-00
	ICS	G03F007-075; C08G077-442; C08L083-10
	IPCI	G03F0007-00 [ICM,6]; G03F0007-075 [ICS,6]; C08G0077-442 [ICS,6]; C08G0077-00 [ICS,6,C*]; C08L0083-10 [ICS,6]; C08L0083-00 [ICS,6,C*]
	IPCR	G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-075 [I,C*]; G03F0007-075 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]
JP 2002236439	ECLA	G03F007/00B3; G03F007/075M; G03F007/075M2; G03H001/02
	IPCI	G03H0001-02 [ICM,7]; C08F0002-44 [ICS,7]; C08F0002-50 [ICS,7]; C08F0002-46 [ICS,7,C*]; C08F0230-04 [ICS,7]; C08F0230-00 [ICS,7,C*]; C08F0291-00 [ICS,7]; C08G0065-08 [ICS,7]; C08G0065-00 [ICS,7,C*]; G03F0007-004 [ICS,7]; G03F0007-028 [ICS,7]; G03F0007-032 [ICS,7]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C08F0002-44 [I,C*]; C08F0002-44 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0230-00 [I,C*]; C08F0230-04 [I,A]; C08F0291-00 [I,C*]; C08F0291-00 [I,A]; C08G0065-00 [I,C*]; C08G0065-08 [I,A]; G03F0007-028 [I,C*]; G03F0007-028 [I,A]; G03F0007-032 [I,C*]; G03F0007-032 [I,A]; G03H0001-02 [I,C*]; G03H0001-02

[I,A]

JP 2002236440 IPCI G03H0001-02 [ICM,7]; C08F0002-44 [ICS,7]; C08F0002-50 [ICS,7]; C08F0002-46 [ICS,7,C\*]; C08F0030-04 [ICS,7]; C08F0030-00 [ICS,7,C\*]; C08F0291-00 [ICS,7]; C08G0085-00 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-028 [ICS,7]; G03F0007-033 [ICS,7]; G03F0007-075 [ICS,7]

IPCR G03F0007-004 [I,C\*]; G03F0007-004 [I,A]; C08F0002-44 [I,C\*]; C08F0002-44 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0030-00 [I,C\*]; C08F0030-04 [I,A]; C08F0291-00 [I,C\*]; C08F0291-00 [I,A]; C08G0085-00 [I,C\*]; C08G0085-00 [I,A]; G03F0007-028 [I,C\*]; G03F0007-028 [I,A]; G03F0007-033 [I,C\*]; G03F0007-033 [I,A]; G03F0007-075 [I,C\*]; G03F0007-075 [I,A]; G03H0001-02 [I,C\*]; G03H0001-02 [I,A]

JP 2003043903 IPCI G03H0001-02 [ICM,7]; C08F0002-44 [ICS,7]; C08F0291-16 [ICS,7]; C08F0291-00 [ICS,7,C\*]; G02B0005-32 [ICS,7]; G03F0007-004 [ICS,7]; G03F0007-027 [ICS,7]; G03F0007-028 [ICS,7]; G03F0007-032 [ICS,7]

IPCR G03F0007-004 [I,C\*]; G03F0007-004 [I,A]; C08F0002-44 [I,C\*]; C08F0002-44 [I,A]; C08F0291-00 [I,C\*]; C08F0291-16 [I,A]; G02B0005-32 [I,C\*]; G02B0005-32 [I,A]; G03F0007-027 [I,C\*]; G03F0007-027 [I,A]; G03F0007-028 [I,C\*]; G03F0007-028 [I,A]; G03F0007-032 [I,C\*]; G03F0007-032 [I,A]; G03H0001-02 [I,C\*]; G03H0001-02 [I,A]

US 2002110740 IPCI G03H0001-02 [ICM,7]; G03C0001-725 [ICS,7]; G03C0001-72 [ICS,7,C\*]; G03C0001-735 [ICS,7]; G03C0001-73 [ICS,7,C\*]

IPCR G03F0007-00 [I,A]; G03F0007-00 [I,C\*]; G03F0007-075 [I,A]; G03F0007-075 [I,C\*]; G03H0001-02 [I,A]; G03H0001-02 [I,C\*]

NCL 430/001.000; 359/003.000; 430/002.000; 430/281.100

ECLA G03F007/00B3; G03F007/075M; G03F007/075M2; G03H001/02

AB A photosensitive composition and a photosensitive medium for volume hologram recording comprises a photopolymn. reactive compound (a monomer) and any one of the following binder: (a) an organic-inorg. hybrid polymer obtainable by copolymg. an organometallic compound  $R_1m M_1 (OR_2)_n$  ( $M_1$  = metallic atom;  $R_1$  = C1-10 ethylenically unsatd. bonding;  $R_2$  = C1-10 alkyl;  $m+n$  = number of valence of metal  $M_1$ ,  $m \geq 1$ ;  $n \geq 1$ ) with an ethylenic monomer and/or its hydrolyzed polycondensate; (b) an organic-inorg. hybrid polymer obtainable by copolymg. an organometallic compound  $R_4m Si (OR_5)_n$  ( $R_4$  = C1-10 group having ethylenically unsatd. bonding;  $R_5$  = C1-10 alkyl;  $m+n = 4$ ;  $m \geq 1$ ;  $n \geq 1$ ) with an ethylenic monomer and/or its hydrolyzed polycondensate; and (c) a binder resin bonded to a metal or a combination use of a binder resin containing a hydroxyl group and/or carboxyl group and a metal chelate compound The present invention relates to a photosensitive composition for forming a volume hologram applicable to a graphic art, a security card and optical elements such as color filter, a reflection plate for display.

ST holog recording hybrid organometallic particle

IT Holography  
(photosensitive composition for volume hologram recording)

IT Hybrid organic-inorganic materials  
(photosensitive composition for volume hologram recording containing)

IT Transition metal complexes  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive composition for volume hologram recording containing)

IT 63087-26-3P  
RL: POF (Polymer in formulation); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(photosensitive composition for volume hologram recording containing)

IT 25721-76-0, Polyethylene glycol dimethacrylate 117277-22-2, YD 7017  
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(photosensitive composition for volume hologram recording containing)  
 IT 78-10-4, KBE04 1071-76-7, Orgatix ZA60 17927-72-9, Orgatix TC-100  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (photosensitive composition for volume hologram recording containing)

L16 ANSWER 20 OF 85 CAPLUS COPYRIGHT 2007 ACS. on STN

AN 2001:721614 CAPLUS

DN 135:249448

ED Entered STN: 04 Oct 2001

TI Photomasking of photosensitive polyimides with organometallic compounds for photolithography on silicon chips

IN Munoz Pascual, Francisco J.; Dominguez Horna, Carlos

PA Consejo Superior de Investigaciones Cientificas, Spain

SO Span., 9 pp.

CODEN: SPXXAD

DT Patent

LA Spanish

IC ICM H01L021-312

ICS G03F007-037; G03F007-038; G03F007-075; G03F007-029; G03F007-36;  
 C08L079-08; C08K005-3417; C08K005-54

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	ES 2146128	A1	20000716	ES 1995-645	19950331
	ES 2146128	B1	20010316		
PRAI	ES 1995-645		19950331		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
ES 2146128	ICM	H01L021-312
	ICS	G03F007-037; G03F007-038; G03F007-075; G03F007-029; G03F007-36; C08L079-08; C08K005-3417; C08K005-54
	IPCI	H01L0021-312 [ICM,7]; H01L0021-02 [ICM,7,C*]; G03F0007-037 [ICS,7]; G03F0007-032 [ICS,7,C*]; G03F0007-038 [ICS,7]; G03F0007-075 [ICS,7]; G03F0007-029 [ICS,7]; G03F0007-36 [ICS,7]; C08L0079-08 [ICS,7]; C08L0079-00 [ICS,7,C*]; C08K0005-3417 [ICS,7]; C08K0005-54 [ICS,7]; C08K0005-00 [ICS,7,C*]
	IPCR	C08K0005-00 [I,C*]; C08K0005-3417 [I,A]; C08K0005-54 [I,A]; C08L0079-00 [I,C*]; C08L0079-08 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]; G03F0007-032 [I,C*]; G03F0007-037 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]; G03F0007-075 [I,C*]; G03F0007-075 [I,A]; G03F0007-36 [I,C*]; G03F0007-36 [I,A]; H01L0021-02 [I,C*]; H01L0021-312 [I,A]

AB The process consists of adhesion of a photoresin to a substrate, such as Si oxide, using an organosilane, e.g., trimethoxy Pr silyl methacrylate (MPTS) or 3-aminopropyl triethoxysilane, silylation by submersion of the wafers of Si in a solution of MPTS in toluene combined with  $\geq 0.5$  volume% water, holding at  $< 90^\circ$  for approx. 4 h, rinsing with MEK, and depositing the polyimide layer by centrifuging; photopolymn. of the organosilane to form a polysiloxane resulting from contact with moisture and crosslinking by photochem. excitation with UV light; producing pos. and neg. images depending on the order of the sequence of steps; and development by reactive ion etching using an O plasma after imidation of the polymer by heating at  $< 400^\circ$ . The process gives pos. or neg. patterns with respect to the mask using the same photosensitive precursors and depending only on the order of exposure and silylation. It can be used for photodefinition of polymer layers of any thickness and applied to encapsulation of chemical sensors, multichip modules, microelectronic technol., electronic sensors, and integrated optics.

ST organosilane silylation photoresin adhesion photomasking; oxygen plasma reactive ion etching photolithog

IT Sputtering  
(etching, reactive, oxygen; photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT Silanes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(organosilanes, substrate silylation agent; photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT Photolithography  
Photoresists  
Silylation  
(photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT Polyimides, processes  
Polysiloxanes, processes  
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); FORM (Formation, nonpreparative); PROC (Process)  
(photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT Etching  
(sputter, reactive, oxygen; photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT 7782-44-7, Oxygen, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(plasma; photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

IT 919-30-2, 3-Aminopropyltriethoxysilane 2530-85-0  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(substrate silylation agent; photomasking of photosensitive polyimides with organometallic compds. for photolithog. with oxygen plasma reactive ion etching)

L16 ANSWER 21 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:494019 CAPLUS

DN 135:211356

ED Entered STN: 09 Jul 2001

TI A novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization

AU Grotzinger, C.; Burget, D.; Jacques, P.; Fouassier, J. P.

CS Departement de Photochimie Generale, UMR CNRS No. 7525, Ecole Nationale Supérieure de Chimie, Mulhouse, 68093, Fr.

SO Journal of Applied Polymer Science (2001), 81(10), 2368-2376  
CODEN: JAPNAB; ISSN: 0021-8995

PB John Wiley & Sons, Inc.

DT Journal

LA English

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 29, 41

AB The photochem. of the complex formed between a Rose Bengal dianion (RB) and a ferrocenium salt [Fc(+)] is described in this article. Stoichiometric anal. of the crystal showed that the Fc(+):RB ratio is 2:1. The dissociation percentage of complex RB(Fc)2 in several solvents was evaluated using fluorescence studies. In nonpolar media, in which most of the RB(Fc)2 exists as contact ion pairs, the photodegrdn. rate of the complex was found to be unaffected by the presence of oxygen and led to photoproducts capable of initiating a radical polymerization reaction. Because of this, the initiation step showed low oxygen inhibition. In fact, in a visible-light photoinitiating system such as one composed of xanthene dye (Rose Bengal), ferrocenium salt, amine, and hydroperoxide, substituting the complex RB(Fc)2 for the sensitizing dye RB led to an increase in

efficiency of the polymerization (especially under aerated conditions) as compared to that obtained in the presence of benzoyl phosphine oxide derivs.

ST dye fluorescence organometallic complex photoinitiator acrylic resin polymn; photopolymn kinetics anti air inhibition dye organometallic complex

IT Dissociation  
Dyes  
Photochemical bleaching  
UV and visible spectra  
(a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT Acrylic polymers, preparation  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT NMR (nuclear magnetic resonance)  
(chemical shift; of a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT Fluorescence  
Polymerization kinetics  
Solvent effect  
(of a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT Polymerization catalysts  
(photopolymn.; a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 105-59-9, Methyldiethanolamine  
RL: NUU (Other use, unclassified); USES (Uses)  
(a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 32760-80-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 632-69-9 91491-51-9, Rose Bengal bis(triethylammonium) salt  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(dye; a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 5888-33-5, Sartomer 506 13048-33-4, 1,6-Hexanediol diacrylate 26570-48-9, Sartomer 344 86003-21-6, Actilane 20  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photo-crosslinked; a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 80-15-9, Cumene hydroperoxide  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalyst; a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

IT 358402-52-5P  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(polymerization catalyst; a novel and efficient xanthenic dye-organometallic ion-pair complex for photoinitiating polymerization)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L16 ANSWER 22 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:45522 CAPLUS

DN 134:266577

ED Entered STN: 19 Jan 2001

TI Generation of bases and anions from inorganic and organometallic photoinitiators

AU Kutal, C.

CS Department of Chemistry, University of Georgia, Athens, GA, 30602, USA

SO Coordination Chemistry Reviews (2001), 211, 353-368

CODEN: CCHRAM; ISSN: 0010-8545

PB Elsevier Science S.A.

DT Journal; General Review

LA English

CC 35-0 (Chemistry of Synthetic High Polymers)

AB A review with 37 refs. on novel photobase and photoanion generators. Fundamental studies of these systems and examples of their potential applications are described.

ST review inorg organometallic photoinitiator

IT Polymerization catalysts

(photopolymn.; generation of bases and anions from inorg. and organometallic photoinitiators)

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

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L16 ANSWER 23 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:817058 CAPLUS

DN 134:57455

ED Entered STN: 21 Nov 2000

TI Determination of thermal cure kinetics of thin films of photocatalyzed dicyanate ester by FTIR emission spectroscopy

AU Liu, Heping; George, G. A.

CS Centre for Instrumental and Developmental Chemistry, Queensland University of Technology, Brisbane, 4001, Australia

SO Polymer International (2000), 49(11), 1505-1512

CODEN: PLYIEI; ISSN: 0959-8103

PB John Wiley & Sons Ltd.

DT Journal

LA English

CC 37-6 (Plastics Manufacture and Processing)

AB Emission FTIR spectroscopy was a suitable technique for monitoring the thermal cure of thin films of photocatalyzed dicyanate ester resins. The kinetics of the polymerization of a com. cyanate ester resin (AroCy RTX-366) catalyzed by an organometallic compound, tricarbonyl cyclopentadienyl manganese (CpMn(CO)<sub>3</sub>), have been determined using this technique and the results compared with those obtained from transmission FTIR. The trimerization reaction rate of the resin is found to have a first order dependence upon both the cyanate fraction and the active catalyst concentration until diffusion control occurs. To elucidate the mechanism, a system with premade catalyst, which was the photoreaction product of the resin and the organometallic compound, has also been studied. The activation energy for this system is 91 ± 10 kJ mol<sup>-1</sup> compared to 72 ± 8 kJ mol<sup>-1</sup> for the directly irradiated system. This may arise from different distributions of three photoproducts identified as complexes between manganese and the cyanate ester.

ST thermal crosslinking kinetics dicyanate ester resin; FTIR crosslinking kinetics dicyanate ester resin; manganese catalyst polymn dicyanate ester

IT Polymerization catalysts

(photopolymn., tricarbonylcyclopentadienylmanganese; kinetics of thermal crosslinking of dicyanate ester resin prepared in presence of)

IT Crosslinking kinetics

(thermal; determination of thermal cure kinetics of thin films of photocatalyzed dicyanate ester by FTIR emission spectroscopy)

IT 12079-65-1, Tricarbonylcyclopentadienylmanganese

RL: CAT (Catalyst use); USES (Uses)

(catalysts; kinetics of thermal crosslinking of dicyanate ester resin prepared in presence of)

IT 132692-49-0, AroCy XU-366 homopolymer

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(determination of thermal cure kinetics of thin films of photocatalyzed dicyanate ester by FTIR emission spectroscopy)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L16 ANSWER 24 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:802403 CAPLUS

DN 133:351005

ED Entered STN: 14 Nov 2000

TI Onium borates/borates of organometallic complexes and cationic initiation of polymerization of functional compounds

IN Castellanos, Frederic; Cavezzan, Jacques; Fouassier, Jean-Pierre; Priou, Christian

PA Rhone-Poulenc Chimie SA, Fr.

SO U.S., 8 pp., Cont.-in-part of U.S. 5,668,192.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08G059-68

INCL 528410000

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 35, 67

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6147184	A	20001114	US 1997-851952	19970506
	FR 2688783	A1	19930924	FR 1992-3440	19920323
	US 5468902	A	19951121	US 1993-35838	19930323
	US 5550265	A	19960827	US 1995-400970	19950308
	US 5668192	A	19970916	US 1996-634228	19960418
	US 6153661	A	20001128	US 1997-851713	19970506
PRAI	FR 1992-3440	A	19920323		
	US 1993-35838	A3	19930323		
	US 1995-400970	A3	19950308		
	US 1996-634228	A2	19960418		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6147184	ICM	C08G059-68
	INCL	528410000
	IPCI	C08G0059-68 [ICM,7]; C08G0059-00 [ICM,7,C*]
	IPCR	C08F0002-46 [I,C*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-52 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,C*]; G03F0007-029 [I,C*]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
	NCL	528/410.000; 528/411.000; 528/412.000
	ECLA	C08F002/50; C08G059/24; C08G059/68; C08G059/72;

FR 2688783	IPCI	G03F007/004B; G03F007/029; G03F007/038 C07F0005-02 [ICM,5]; C07F0005-00 [ICM,5,C*]; C07C0025-00 [ICS,5]; C07C0043-257 [ICS,5]; C07C0043-00 [ICS,5,C*]; C08F0004-52 [ICS,5]; C08F0004-00 [ICS,5,C*]; C08F0016-12 [ICS,5]; C08F0016-00 [ICS,5,C*]; C08G0059-68 [ICS,5]; C08G0059-00 [ICS,5,C*]
	IPCR	C07F0005-00 [I,C*]; C07F0005-02 [I,A]; C07F0009-00 [I,C*]; C07F0009-50 [I,A]; C07F0019-00 [I,C*]; C07F0019-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-52 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
US 5468902	IPCI	C07F0005-02 [ICM,6]; C07F0005-00 [ICM,6,C*]; C07F0011-00 [ICS,6]
	IPCR	C07F0005-00 [I,C*]; C07F0005-02 [I,A]; C07F0009-00 [I,C*]; C07F0009-50 [I,A]; C07F0019-00 [I,C*]; C07F0019-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-52 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
	NCL	568/006.000; 556/007.000; 562/899.000; 568/001.000; 568/007.000; 568/074.000; 568/077.000
	ECLA	C07F005/02B; C08F002/50; C08F004/52; C08G059/24; C08G059/68; C08G059/72; G03F007/004B; G03F007/004D; G03F007/029; G03F007/038
US 5550265	IPCI	C07F0005-02 [ICM,6]; C07F0005-00 [ICM,6,C*]; C07F0009-00 [ICS,6]; C07F0013-00 [ICS,6]
	IPCR	C07F0005-00 [I,C*]; C07F0005-02 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-52 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-029 [I,A]; G03F0007-029 [I,C*]; G03F0007-038 [I,A]; G03F0007-038 [I,C*]
	NCL	556/007.000; 556/043.000; 556/046.000; 556/047.000; 556/058.000; 556/136.000; 556/143.000
	ECLA	C07F005/02B; C08F002/50; C08F004/52; C08G059/24; C08G059/68; C08G059/72; G03F007/004B; G03F007/004D; G03F007/029; G03F007/038
US 5668192	IPCI	C08F0002-46 [ICM,6]; C07F0005-00 [ICS,6]; C07F0009-00 [ICS,6]; C07F0013-00 [ICS,6]
	IPCR	C08F0002-46 [I,C*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
	NCL	522/031.000; 522/053.000; 522/066.000; 549/003.000; 549/015.000; 549/023.000; 549/028.000; 556/007.000; 556/043.000; 556/046.000; 556/047.000; 556/058.000; 556/136.000; 556/143.000; 562/899.000; 568/001.000; 568/006.000; 568/007.000; 568/074.000; 568/077.000
	ECLA	C08F002/50; C08G059/24; C08G059/68; C08G059/72; G03F007/004B; G03F007/004D; G03F007/029; G03F007/038
US 6153661	IPCI	C08F0002-46 [ICM,7]
	IPCR	C08F0002-46 [I,C*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-52 [I,A]; C08G0059-00 [I,C*]; C08G0059-24 [I,A]; C08G0059-68 [I,A]; C08G0059-72 [I,A]; G03F0007-004 [I,C*];

G03F0007-004 [I,A]; G03F0007-029 [I,C\*]; G03F0007-029 [I,A]; G03F0007-038 [I,C\*]; G03F0007-038 [I,A]

NCL 522/031.000; 522/049.000; 522/066.000; 522/067.000; 522/068.000; 522/100.000; 522/181.000; 525/327.300; 525/328.900; 525/337.000; 526/131.000; 526/134.000; 526/160.000

ECLA C08F002/50; C08F004/52; C08G059/24; C08G059/68; C08G059/72; G03F007/004B; G03F007/029; G03F007/038

OS MARPAT 133:351005

AB Onium borates of Group 15-17 elements, complex of oxoisothiochromanium cation or borates of an organometallic complex of Group 4-10 elements, are well suited for the photochem./electron beam cationic initiation of polymerization/crosslinking of monomer, oligomer or polymer having functional groups, the anionic borate having formula [BXaRb]- in which a and b = 0-4 and a+b=4; X = halogen when a = ≤3 and an OH functional group when a ≤2; R = Ph substituted by ≥1 electron-withdrawing substituent or ≥2 halogen atoms, or an aryl radical containing ≥2 aromatic ring members, or aryl radical bearing ≥1 electron-withdrawing substituent. Thus, 7 g Na tetrakis(pentafluorophenyl)borate and 3.5 g (η5-cyclopentadienyl)(η6-methylnaphthalene)iron tetrafluoroborate gave 8.9 g (η5-cyclopentadienyl)(η6-1-methylnaphthalene)iron tetrakis(pentafluorophenyl)borate.

ST cyclopentadienyl methylnaphthalene iron tetrakis(pentafluorophenyl)borate polymn catalyst; iron borate crosslinking catalyst epoxy

IT Onium compounds  
Organometallic compounds  
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(borates; onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT Crosslinking catalysts  
(photochem.; onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT Polymerization catalysts  
(photopolymn.; onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT 153760-74-8 153766-10-0 153818-21-4 306274-49-7  
RL: CAT (Catalyst use); USES (Uses)  
(onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT 153606-14-5P, Diphenyliodonium tetrakis(pentafluorophenyl)borate 153606-15-6P 153660-59-4P, Bis(dodecylphenyl)iodonium tetrakis(pentafluorophenyl)borate 153760-71-5P 153760-72-6P 153760-73-7P  
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT 1818-07-1P, n-Octyl phenyl ether 2797-28-6P, Lithium tetrakis(pentafluorophenyl)borate 27126-76-7P, Hydroxytosyloxyiodobenzene 125604-88-8P, (4-Octyloxyphenyl)phenyliodonium tosylate 153660-37-8P, Bis(dodecylphenyl)iodonium chloride  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

IT 98-82-8, Cumene 102-54-5, Ferrocene 108-95-2, Phenol, reactions 109-72-8, n-Butyllithium, reactions 123-01-3, Dodecylbenzene 344-04-7, Bromopentafluorobenzene 1483-72-3, Diphenyliodonium chloride 3240-34-4, Iodobenzene diacetate 7758-05-6, Potassium iodate 25085-98-7, UVR-6110 26746-34-9, Octane, bromo 33435-42-6 76603-85-5

149213-65-0, Sodium tetrakis(pentafluorophenyl)borate

RL: RCT (Reactant); RACT (Reactant or reagent)

(onium borates/borates of organometallic complexes and polymerization or crosslinking of functional compds.)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L16 ANSWER 25 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:755640 CAPLUS

DN 134:71989

ED Entered STN: 27 Oct 2000

TI Photolytic Ring-Opening Polymerization of Phosphorus-Bridged  
[1]Ferrocenophane Coordinating to an Organometallic Fragment

AU Mizuta, Tsutomu; Onishi, Makoto; Miyoshi, Katsuhiko

CS Department of Chemistry Graduate School of Science, Hiroshima University,  
Higashi-Hiroshima, 739-8526, Japan

SO Organometallics (2000); 19(24), 5005-5009

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 29, 75

AB Manganese and tungsten complexes bearing a strained phosphorus-bridged  
[1]ferrocenophane were prepared by reaction of their appropriate THF  
complexes with (1,1'-ferrocenediyl)phenylphosphine (1). The monomer  
complexes [Mn( $\eta^5$ -C<sub>5</sub>H<sub>4</sub>R)(CO)<sub>2</sub>(1)] (R = Me, H) and [W(CO)<sub>5</sub>(1)] thus  
obtained were found to undergo a ring-opening polymerization (ROP) upon  
irradiation

with UV-vis light for 10 min. in THF or acetonitrile. Because they  
polymerize in the same manner as the free ligand 1, with the metallic  
fragment intact, the photopolymerization reaction is considered  
applicable to a variety of organometallic fragments bearing 1 as  
a ligand. The crystal structure of [W(CO)<sub>5</sub>(1)] was determined

ST photolysis ring opening polymer phosphorus bridged ferrocenophane manganese  
tungsten; crystal mol structure ferrocenediyl phenylphosphine tungsten  
tetracarbonyl complex

IT Crystal structure

Molecular structure

(of ferrocenediyl phenylphosphine tungsten tetracarbonyl complex)

IT Polymerization

(ring-opening, photochem.; photolytic ring-opening polymerization of phosphorus-bridged ferrocenophane coordinating to organometallic fragment)

- IT 73203-07-3  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(crystal structure and photolytic ring-opening polymerization of)
- IT 51922-84-0  
RL: FMU (Formation, unclassified); RCT (Reactant); FORM (Formation, nonpreparative); RACT (Reactant or reagent)  
(photolytic ring-opening polymerization of phosphorus-bridged ferrocenophane coordinating to organometallic fragment)
- IT 12079-65-1, Tricarbonyl( $\eta^5$ -cyclopentadienyl)manganese 12108-13-3,  
Tricarbonyl( $\eta^5$ -methylcyclopentadienyl)manganese 72954-06-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photolytic ring-opening polymerization of phosphorus-bridged ferrocenophane coordinating to organometallic fragment)
- IT 315195-51-8P 315195-52-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(photolytic ring-opening polymerization of phosphorus-bridged ferrocenophane coordinating to organometallic fragment)
- IT 315195-66-5P 315195-70-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and sulfurization of)
- IT 114411-49-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and thionation of)
- IT 153371-29-0P 315195-57-4P 315195-59-6P 315195-60-9P 315195-61-0P  
315195-65-4P 315195-71-2P 315195-73-4P 315195-75-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

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L16 ANSWER 26 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:619325 CAPLUS

DN 134:17820

ED Entered STN: 06 Sep 2000

TI The metal nature effects in cryopolymerized metalated poly-p-xylylene

AU Alexandrova, L.; Sansores, E.; Martinez, E.; Espinoza Rodriguez, E.; Gerasimov, G.

CS Instituto de Investigaciones en Materiales, Departamento de Polimeros, UNAM, Mexico City, Mex.

SO Polymer (2000), Volume Date 2001, 42(1), 273-280  
CODEN: POLMAG; ISSN: 0032-3861

PB Elsevier Science Ltd.

DT Journal

LA English

CC 35-7 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 36, 78

AB Ag-, Mg-, and Mn-containing poly(p-xylylene)s were obtained by solid-state photopolymerization of metal-p-xylylene mixts. at 77 K. Interaction of the metals with p-xylylene before and after polymerization was studied using IR and UV-Vis spectroscopies. Mg and Mn form strongly optically absorbing complexes with p-xylylene during co-deposition, whereas Ag produces nanoclusters without chemical interaction with the monomer and these clusters remain in the polymer matrix practically unchanged. Mg forms ionic complexes with a large contribution of covalent bonding. The p-xylylene in such complexes exists in a pseudo-benzenoid form. During polymerization,

the

complexes transform into  $\sigma$ -bonded organomagnesium compds. incorporated within the polymer chains. Mn as a transition metal produces complexes of two types. Complexes of the first type are similar to those of Mg demonstrating similar behavior in the course of polymerization, whereas those of the second type, formed by the interaction of d-orbitals of Mn with  $\pi$ -orbitals of p-xylylene, are destroyed during polymerization

ST metalated polyxylylene prepn cryogenic photopolymer cyclophane pyrolysis; magnesium xylene polymer cryogenic temp organometallic cluster; silver polyxylylene matrix nanocluster formation structure; optical absorption metalated polyxylylene nanostructure cluster

IT Polymer morphology  
(phase; role of silver vs. magnesium and manganese on formation and morphol. and optical absorption of cryopolymerized metalated poly(p-xylylene)s)

IT Polymerization  
(photopolymerization, cryogenic temperature; role of silver vs. magnesium and manganese on formation and morphol. and optical absorption of cryopolymerized metalated poly(p-xylylene)s)

IT Metalation  
Nanostructures

Optical absorption  
Polymer chains  
Thermal decomposition  
Thermal stability

(role of silver vs. magnesium and manganese on formation and morphol.  
and optical absorption of cryopolyimd. metalated poly(p-xylylene)s)

IT 7440-22-4, Silver, processes

RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)

(nanoclusters; role of silver vs. magnesium and manganese on formation  
and morphol. and optical absorption of cryopolyimd. metalated  
poly(p-xylylene)s)

IT 25722-33-2, Poly(p-xylylene) 237058-57-0, 2,2-p-Cyclophane-manganese  
copolymer

RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
PROC (Process)

(role of silver vs. magnesium and manganese on formation and morphol.  
and optical absorption of cryopolyimd. metalated poly(p-xylylene)s)

IT 1633-22-3, 2,2-p-Cyclophane

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
(Process); RACT (Reactant or reagent)

(role of silver vs. magnesium and manganese on formation and morphol.  
and optical absorption of cryopolyimd. metalated poly(p-xylylene)s)

IT 310402-09-6P, Magnesium-p-xylylene copolymer

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(role of silver vs. magnesium and manganese on formation and morphol.  
and optical absorption of cryopolyimd. metalated poly(p-xylylene)s)

IT 502-86-3P, p-Xylylene

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(role of silver vs. magnesium and manganese on formation and morphol.  
and optical absorption of cryopolyimd. metalated poly(p-xylylene)s)

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L16 ANSWER 27 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2000:562856 CAPLUS  
 DN 133:157715  
 ED Entered STN: 15 Aug 2000  
 TI Photocurable urethane-modified acrylic polymer compositions and their use  
 in formation of uneven patterns  
 IN Ueda, Kenji; Shiota, Satoshi; Hojo, Mikiko  
 PA Dai Nippon Printing Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F299-00  
 ICS C08F002-48; C08K005-5415; C08L083-04  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 37, 73

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000226421	A	20000815	JP 1999-167631	19990615
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PRAI	JP 1998-340475	A	19981130		
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	JP 1998-239746	A	19980826		
	JP 1998-241169	A	19980827		
	JP 1999-167631	A	19990615		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000226421	ICM	C08F299-00
	ICS	C08F002-48; C08K005-5415; C08L083-04
	IPCI	C08F0299-00 [ICM,7]; C08F0002-48 [ICS,7]; C08K0005-5415 [ICS,7]; C08L0083-04 [ICS,7]
	IPCR	C08F0002-46 [I,C*]; C08F0002-48 [I,A]; C08F0290-00 [I,C*]; C08F0290-12 [I,A]; C08F0299-00 [I,A]; C08F0299-00 [I,C*]; C08K0005-00 [I,C*]; C08K0005-5415 [I,A]; C08L0083-00 [I,C*]; C08L0083-04 [I,A]; G03F0007-027 [I,A]; G03F0007-027 [I,C*]
US 6344495	IPCI	C08L0075-16 [ICM,7]; B29D0011-00 [ICS,7]; G02B0003-08 [ICS,7]
	IPCR	B29D0011-00 [I,A]; B29D0011-00 [I,C*]; C08F0008-00 [I,C*]; C08F0008-30 [I,A]; C08F0222-00 [I,C*]; C08F0222-10 [I,A]; C08F0290-00 [I,C*]; C08F0290-12 [I,A]; C08F0299-00 [I,A]; C08F0299-00 [I,C*]; C08G0018-00 [I,C*]; C08G0018-62 [I,A]; C08G0018-81 [I,A]
	NCL	522/096.000; 264/001.310; 264/001.380; 264/001.700; 427/162.000; 522/097.000
	ECLA	B29D011/00; C08F290/12C; C08F299/00; C08G018/62G5D3; C08G018/62G6D; C08G018/81B4

AB The compns. contain the polymers shown as (CH<sub>2</sub>CR<sub>1</sub>CO<sub>2</sub>R<sub>2</sub>)<sub>l</sub>(CH<sub>2</sub>CR<sub>1</sub>CO<sub>2</sub>H)<sub>m</sub>(CH<sub>2</sub>CR<sub>1</sub>CO<sub>2</sub>XOCONHYOCOCR<sub>1</sub>:CH<sub>2</sub>)<sub>n</sub>(CH<sub>2</sub>CR<sub>1</sub>CO<sub>2</sub>XOH)<sub>o</sub> (R<sub>1</sub> = H, Me; R<sub>2</sub> = C<sub>1</sub>-16 hydrocarbyl; X, Y = linear or branched alkylene; l = 20-90; m = 0-50; n = 10-80; o = 0-20; l + m + o = 100); release agents, and organometallic coupling agents. Uneven patterns are formed by applying the compns. on one side or both sides of substrates, drying the compns. to give photocurable polymer layers, embossing the layers, and

exposing the layers to light for curing. High-strength heat-, scratch-, water-, and chemical resistant films with good adhesion to substrates, suitable for diffraction gratings or relief holograms can be formed.

- ST photocurable urethane acrylic polymer relief hologram;  
diffraction grating photocurable urethane acrylic polymer; release agent  
photocurable urethane acrylic polymer; organometal coupling agent urethane  
acrylic polymer; embossing photocurable polymer uneven pattern formation
- IT Polysiloxanes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(amino, release agents; photocurable urethane-modified acrylic polymer  
compns. for formation of uneven patterns for diffraction gratings or  
relief holograms)
- IT Organometallic compounds  
RL: MOA (Modifier or additive use); USES (Uses)  
(coupling agents; photocurable urethane-modified acrylic polymer  
compns. for formation of uneven patterns for diffraction gratings or  
relief holograms)
- IT Coupling agents  
(organometallic compds.; photocurable urethane-modified  
acrylic polymer compns. for formation of uneven patterns for  
diffraction gratings or relief holograms)
- IT Crosslinking  
(photochem.; photocurable urethane-modified acrylic polymer compns. for  
formation of uneven patterns for diffraction gratings or relief  
holograms)
- IT Embossing  
Holographic diffraction gratings  
Holography  
Parting materials  
(photocurable urethane-modified acrylic polymer compns. for formation  
of uneven patterns for diffraction gratings or relief holograms  
)
- IT Polysiloxanes, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(release agents; photocurable urethane-modified acrylic polymer compns.  
for formation of uneven patterns for diffraction gratings or relief  
holograms)
- IT 75-94-5, KA 1003 919-30-2, KBE 903 2530-83-8, KBM 403 2530-85-0, KBM  
503 15306-17-9, ALCH TR 61417-49-0, KRTTS  
RL: MOA (Modifier or additive use); USES (Uses)  
(coupling agents; photocurable urethane-modified acrylic polymer  
compns. for formation of uneven patterns for diffraction gratings or  
relief holograms)
- IT 93974-90-4P, 2-Hydroxyethyl methacrylate-Karenzu MOI-methyl methacrylate  
copolymer 262857-02-3P, 2-Hydroxyethyl methacrylate-Karenzu  
MOI-methacrylic acid-methyl methacrylate copolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical  
process); TEM (Technical or engineered material use); PREP (Preparation);  
PROC (Process); USES (Uses)  
(photocurable urethane-modified acrylic polymer compns. for formation  
of uneven patterns for diffraction gratings or relief holograms  
)
- IT 58130-03-3, X 22-164B 97917-34-5, KF 8012 259187-10-5, KF 7312  
263006-99-1, X 21-3056  
RL: MOA (Modifier or additive use); USES (Uses)  
(release agents; photocurable urethane-modified acrylic polymer compns.  
for formation of uneven patterns for diffraction gratings or relief  
holograms)

L16 ANSWER 28 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:534577 CAPLUS  
DN 131:322731  
ED Entered STN: 26 Aug 1999  
TI Wavelength dependent photochemistry of an iron-arene

organometallic photoinitiator: a quantitative study of the photoreactivity

AU Jakubek, Vladimir; Lees, Alistair J.  
CS Department of Chemistry, State University of New York at Binghamton,  
Binghamton, NY, 13902-6016, USA  
SO Chemical Communications (Cambridge) (1999), (17), 1631-1632  
CODEN: CHCOFS; ISSN: 1359-7345  
PB Royal Society of Chemistry  
DT Journal  
LA English  
CC 29-12 (Organometallic and Organometalloidal Compounds)  
Section cross-reference(s): 22, 74  
AB The quant. photochem. of the widely used cationic photoinitiator complex,  
[CpFe( $\eta^6$ -isopropylbenzene)]PF<sub>6</sub>, was studied in several different  
solvents as a function of exciting wavelength in the 355-683 nm region;  
the photoefficiency results reveal that the system exhibits a strong  
wavelength dependence following excitation into its ligand field (LF)  
manifold and that the photochem. does not occur solely from the lowest  
lying LF triplet excited state.  
ST wavelength dependent photochem iron cyclopentadienyl isopropylbenzene  
complex  
IT Elimination reaction kinetics  
(coordinative, photochem.; of iron cyclopentadienyl isopropylbenzene  
complex)  
IT Photolysis  
(of iron cyclopentadienyl isopropylbenzene complex in presence of  
phenanthroline)  
IT Solvent effect  
(on photochem. dissociation of iron cyclopentadienyl isopropylbenzene  
complex)  
IT Elimination reaction, coordinative  
(photochem.; of iron cyclopentadienyl isopropylbenzene complex)  
IT Polymerization catalysts  
(photopolymer.; wavelength dependent photochem. of iron-arene  
organometallic photoinitiator)  
IT 32760-80-8, ( $\eta^5$ -Cyclopentadienyl)( $\eta^6$ -isopropylbenzene)iron(1+)  
hexafluorophosphate  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT  
(Reactant); PROC (Process); RACT (Reactant or reagent)  
(wavelength dependent photochem. of iron-arene organometallic  
photoinitiator)  
IT 66-71-7, 1,10-Phenanthroline  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(wavelength dependent photochem. of iron-arene organometallic  
photoinitiator in presence of)

RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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IN Michot, Christophe; Armand, Michel; Choquette, Yves; Gauthier, Michel  
PA Acep Inc., Can.; Universite de Montreal; Centre National de la Recherche  
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SO PCT Int. Appl., 66 pp.  
CODEN: PIXXD2  
DT Patent  
LA French  
IC ICM C07C317-04  
ICS C07D339-06; C07D311-82; C07C317-12; C08G061-02; C08F232-04;  
H01M010-40; H01M006-16  
CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 23, 24, 25, 28, 52, 67  
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PI	WO 9928292	A1	19990610	WO 1998-FR2585	19981201
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CLASS

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H01M0006-16 [N,A]; H01M0006-18 [N,C\*]; H01M0006-18  
[N,A]; H01M0008-10 [I,C\*]; H01M0008-10 [I,A];  
H01M0010-36 [I,C\*]; H01M0010-36 [N,A]; H01M0010-40  
[I,A]  
NCL 429/188.000; 361/505.000; 429/030.000; 429/221.000;  
429/224.000; 429/231.100; 429/307.000  
ECLA H01G009/038; C07C211/63; C07C211/64; C07C317/04;  
C07C317/12; C07C381/00; C07D213/20B1; C07D213/74B;  
C07D311/82; C07D339/06; C07D491/22+311A+221C+221C+221C+  
221C; C07D521/00B1C3; C07D521/00B3D1; C07F009/54;  
H01G009/20B; H01M008/10E2; H01M010/40B; H01M010/40E3

OS MARPAT 131:59262

AB An ionic composition comprises a salt dissolved in a solvent and has a conductivity

>10<sup>-5</sup> S/cm between -30 and +150°. The cation is a proton, hydronium, hydroxonium, nitrosonium (NO<sup>+</sup>), NH<sub>4</sub><sup>+</sup>, or an organic or organometallic metal cation. The anion is a carbanion bearing a perfluorinated substituent or a substituent at least bearing a F on the α carbon of the carbanion, and two nonperfluorinated electron-withdrawing substituents. The composition can be used as an electrolyte in electrochem. devices, as a catalyst for chemical reactions, and as a photochem. or thermochem. initiator for polymerization or crosslinking reactions. Thus, CH<sub>2</sub>(SO<sub>2</sub>Cl)<sub>2</sub> was amidated with Me<sub>2</sub>NH, treated with NaH, condensed with (trifluoromethylsulfonyl)imidazole, and neutralized with K<sub>2</sub>CO<sub>3</sub> to give (Me<sub>2</sub>NSO<sub>2</sub>)<sub>2</sub>C-(SO<sub>2</sub>CF<sub>3</sub>) K<sup>+</sup>, which was exchanged with LiCl to give (Me<sub>2</sub>NSO<sub>2</sub>)<sub>2</sub>C-(SO<sub>2</sub>CF<sub>3</sub>) Li<sup>+</sup> (I), soluble in polar organic solvents and in poly(ethylene oxide) (II). A solution of I in II at O/Li = 12 shows ionic conductivity >10<sup>-4</sup> S/cm at 60°; an acetone solution of I is a catalyst for the Diels-Alder reaction; and a combination of I with an ethylene oxide-allyl glycidyl ether-Me glycidyl ether copolymer at O/Li = 20 serves as an electrolyte in a Li battery. The analog Me<sub>2</sub>NSO<sub>2</sub>C-(SO<sub>2</sub>CF<sub>3</sub>)SO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>CH:CH<sub>2</sub>-p Li<sup>+</sup> was prepared and copolymerized 6:4 with acrylonitrile, and the resulting polymer 30, ethylene carbonate 35, and propylene carbonate 35% were combined to give a polyelectrolyte gel with ionic conductivity >10<sup>-4</sup> S/cm at 30°.

ST perfluoroalkyl sulfone ionic conductor; battery electrolyte perfluoroalkyl sulfone salt

IT Coating materials

(anticorrosive; preparation of polymeric perfluorocarbyl sulfone salts as)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(matrix; perfluorocarbyl sulfone salts as ionic conductors in)

IT Crosslinking catalysts

(photochem.; preparation of polymeric perfluorocarbyl sulfone salts as)



IT Polymerization catalysts  
(photopolymer.; preparation of polymeric perfluorocarbyl sulfone salts as)

IT Battery electrolytes  
Diels-Alder reaction catalysts  
Fuel cell electrolytes  
Ionic conductors  
(preparation of perfluorocarbyl sulfone salts as)

IT Antistatic agents  
Electrochromic materials  
Photoelectric devices  
Solvents  
(preparation of polymeric perfluorocarbyl sulfone salts as)

IT 3240-34-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(dopant; preparation of perfluorocarbyl sulfone salt polymers as ionic conductors)

IT 25322-68-3 136474-71-0, Allyl glycidyl ether-ethylene oxide-glycidyl methyl ether copolymer 227938-61-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(matrix; perfluorocarbyl sulfone salts as ionic conductors in)

IT 3520-42-1, Sulforhodamine B  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts)

IT 227938-71-8P  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(preparation of perfluorocarbyl sulfone salts as Diels-Alder catalysts)

IT 5063-03-6, 5-Acetyl-2-norbornene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as catalysts for Diels-Alder preparation of)

IT 107-25-5 542-92-7, Cyclopentadiene, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as catalysts for Diels-Alder reaction of)

IT 227937-20-4P 227938-65-0P 227938-68-3P  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 111-92-2, Dibutylamine 124-40-3, reactions 335-05-7, Trifluoromethanesulfonyl fluoride 589-15-1, p-Bromobenzyl bromide 2633-67-2, p-Styrenesulfonyl chloride 5089-70-3, (3-Chloropropyl)triethoxysilane 5799-68-8, Methanedisulfonyl dichloride 26413-19-4, 1,3-Dithiolane 1,1,3,3-tetraoxide 29540-81-6 31876-38-7D, Moniliformin, alkali metal salts 41804-89-1, Potassium triflinate 51270-39-4, 1-Bromo-N,N-dimethylmethanesulfonamide 65039-09-0, 1-Ethyl-3-methyl-1H-imidazolium chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 173852-59-0P 227938-52-5P 227938-53-6P 227938-57-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 227938-73-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

IT 227938-49-0DP, potassium ion-exchanged 227938-51-4DP, potassium ion-exchanged 227938-55-8P 227938-59-2P 227938-63-8P 227938-69-4P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of perfluorocarbyl sulfone salts as ionic conductors)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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L16 ANSWER 30 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1999:50500 CAPLUS  
DN 130:189278  
ED Entered STN: 26 Jan 1999  
TI Laser-written permanent gratings in new liquid crystalline organometallic polymer  
AU Cipparrone, G.; Mazzulla, A.; Aiello, I.; Ghedini, M.  
CS Dipartimento di Fisica, Universita della Calabria e Istituto Nazionale per la Fisica della Materia Unita di Cosenza, 87036, Italy  
SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1998), 320, 165-171  
CODEN: MCLCE9; ISSN: 1058-725X  
PB Gordon & Breach Science Publishers  
DT Journal  
LA English  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 75  
AB Interest in materials for optical storage effect has been intense in the last years. In this paper we report the observation of permanent gratings in a new liquid crystalline side-chain polymer containing a mononuclear cyclopalladated azobenzene complex. Two-beam coupling expts. indicate photorefractive properties. A gain of 900 cm<sup>-1</sup>, without applied elec. field, was determined by two beam coupling measurements. A significant feature of this high-gain material is that this effect occurs in an easily processable pure compound  
ST laser grating liq cryst organometallic polymer; photorefractive effect liq cryst organometallic polymer  
IT Photorefractive effect  
(in liquid crystalline organometallic polymers)  
IT Diffraction gratings  
(laser-written permanent gratings in liquid crystalline organometallic polymers)  
IT Holography  
(liquid crystalline organometallic polymers for)  
IT Liquid crystals  
(organometallic polymers; laser-written permanent gratings in)  
IT 197654-02-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(laser-written permanent gratings in)  
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
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L16 ANSWER 31 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:30980 CAPLUS  
 DN 130:168924  
 ED Entered STN: 18 Jan 1999  
 TI Organometallic complexes as luminescence probes in monitoring thermal and photochemical polymerizations  
 AU Lees, Alistair J.  
 CS Department of Chemistry, State University of New York, Binghamton, NY, 13902-6016, USA  
 SO Coordination Chemistry Reviews (1998), 177, 3-35  
 CODEN: CCHRAM; ISSN: 0010-8545  
 PB Elsevier Science S.A.  
 DT Journal; General Review  
 LA English  
 CC 37-0 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 29  
 AB Recent developments in the use of organometallic complexes as luminescence probes to monitor industrially important thermal and photochem. polymerization reactions are reviewed with 102 refs. Both epoxy resin and acrylate thin-film materials are discussed. Attention is focused on polymer systems incorporating the metal complexes,  $W(CO)_4L$  and  $fac-XRe(CO)_3L$  ( $X = Cl, Br$  or  $I$ , and  $L$  is an  $\alpha, \alpha'$ -diimine ligand such as 2,2'-bipyridine or 1,10-phenanthroline, and related derivs.) which are shown to offer considerable promise as spectroscopic probes. A key feature of these organometallic systems is that they are emissive from low-lying metal-to-ligand charge transfer (MLCT) excited states and that these energy levels are sensitive to environmental rigidity. The luminescence properties of these complexes in both solution and polymeric media are examined in detail and the photophys. parameters of the MLCT excited states are correlated with spectroscopic and rheol. measurements acquired during the curing process of the polymer.  
 ST organometallic complex luminescence probe photopolymn review; epoxy crosslinking luminescence probe review; tungsten carbonyl complex probe photopolymn review; rhenium carbonyl complex probe photopolymn review  
 IT Luminescence  
 (organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 IT Epoxy resins, processes  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 IT Acrylic polymers, preparation  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 IT Polymerization  
 (photopolymn.; organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 IT Carbonyl complexes  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (rhenium and tungsten; organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 IT 7440-15-5D, Rhenium, carbonyl diimine complexes, uses 7440-33-7D, Tungsten, carbonyl diimine complexes, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (luminescence probe; organometallic complexes as luminescence probes in monitoring thermal and photochem. polymerization and crosslinking)  
 RE.CNT 102 THERE ARE 102 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE  
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L16 ANSWER 32 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:742496 CAPLUS

DN 130:43415

ED Entered STN: 23 Nov 1998

TI Dental filling compositions containing monomers and inorganic particle aggregates and manufacture of the aggregates

IN Hosomi, Yasukazu; Honda, Shigemichi; Asai, Masayuki; Tsuchikawa, Masuji

PA San Medical K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A61K006-08

ICS C08F002-44; C08G077-02

CC 63-7 (Pharmaceuticals)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10306008	A	19981117	JP 1995-209315	19950726
	JP 3023065	B2	20000321		
PRAI	JP 1995-209315		19950726		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

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JP 10306008 ICM A61K006-08  
ICS C08F002-44; C08G077-02  
IPCI A61K0006-08 [ICM,6]; C08F0002-44 [ICS,6]; C08G0077-02 [ICS,6]  
IPCR A61K0006-02 [I,C\*]; A61K0006-08 [I,A]; C08F0002-44 [I,A]; C08F0002-44 [I,C\*]; C08G0077-00 [I,C\*]; C08G0077-02 [I,A]

AB The compns. contain (A) polymerizable monomers, (B) polymerization initiators, and (C) particle aggregates of inorg. oxides having average particle size 1-100  $\mu\text{m}$ , and the aggregates comprise primary particles having average particle size 0.01-1  $\mu\text{m}$  containing 1-99 mol%  $\text{SiO}_2$  and 1-99 mol%  $\geq 1$  oxide of group II, III, and/or IV metals. The particle aggregates are manufactured by mixing a material solution as a mixed solution of (a) a solution, prepared by mixing (a') a water-soluble organic solvent solution of  $\text{Si}(\text{OR})_4$  (R = C1-5 alkyl) and (a'') an aqueous solution of 0.3-3% acidic compds. at  $\text{H}_2\text{O}/\text{Si}(\text{OR})_4$  molar ratio 0.01-0.98, and (b) hydrolyzable organometallic compds. of group II, III, and/or IV metals or their water-soluble organic solvent solns. with (c) a homogeneous solution of an aqueous  $\text{NH}_3$  solution and water-soluble organic solvents in the presence of absence of crystal nuclei, separating the hydrolyzed products, and drying and calcining the products at 200-1200°. The compns. show good workability and give product having good gloss, abrasion resistance, and mech. strength. Particle aggregates of  $\text{SiO}_2$  and  $\text{ZrO}_2$  (molar ratio 87.9:12.1) were manufactured from  $\text{Si}(\text{OEt})_4$  and  $\text{Zr}(\text{O}i\text{Bu})_4$  in iso-PrOH by a method as described above. A photopolymerizable paste containing the particle aggregates treated with  $\gamma$ -methacryloxypropyltrimethoxysilane, 2,2-bis(4-methacryloxyphenyl)propane, di(methacryloxyethyl)trimethylhexamethylenediurethane, triethylene glycol dimethacrylate, and photoinitiators showed good workability and the cured product had 97% gloss.

ST photopolymerizable dental filling inorg particle aggregate; composite dental filling inorg particle aggregate; silica zirconia aggregate photopolymerizable dental filling; acrylate inorg particle aggregate dental filling

IT Dental materials and appliances (composites; dental filling compns. containing monomers and particle size-controlled inorg. oxide particle aggregates)

IT Dental materials and appliances (fillings; dental filling compns. containing monomers and particle size-controlled inorg. oxide particle aggregates)

IT 1314-23-4P, Zirconia, biological studies 7631-86-9P, Silica, biological studies 187750-35-2P 189320-50-1P  
RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(dental filling compns. containing monomers and particle size-controlled inorg. oxide particle aggregates)

IT 78-10-4, Tetraethoxysilane 1071-76-7, Tetraethoxyzirconium  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrolysis of; dental filling compns. containing monomers and particle size-controlled inorg. oxide particle aggregates)

L16 ANSWER 33 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:592594 CAPLUS  
DN 129:276366  
ED Entered STN: 18 Sep 1998  
TI New phosphorescence probes for monitoring the kinetics of thermal and photochemical polymerization  
AU Lees, Alistair J.  
CS Department of Chemistry, State University of New York at Binghamton, Binghamton, NY, 13902-6016, USA

SO Polymers & Polymer Composites (1998), 6(3), 121-131  
 CODEN: PPOCEC; ISSN: 0967-3911

PB Rapra Technology Ltd.

DT Journal; General Review

LA English

CC 35-0 (Chemistry of Synthetic High Polymers)

AB This review with 56 refs. summarizes the recent development of phosphorescence probe mols. in both thermal polymerization and photo-initiated processes. Polymers based on epoxy and aromatic cyanate ester thermosetting materials and epoxy and acrylate photosensitive resins are discussed. Most attention is focused on fac-ClRe(CO)<sub>3</sub> (4,7-Ph<sub>2</sub>-phen) (where 4,7-Ph<sub>2</sub>-phen = 4,7-diphenyl-1,10-phenanthroline), and on closely related complexes, as they are strongly luminescent in the visible region and appear to offer considerable promise in probe applications. These spectroscopic probes are shown to be sensitive to viscosity changes of over five orders of magnitude within the polymer network. The luminescence features of these organometallic probe complexes are compared to those of other organic probe mols.

ST phosphorescence probe thermal polymn kinetics review; photopolymn kinetics phosphorescence probe review; epoxy polymn kinetics phosphorescence probe review; acrylate polymn kinetics phosphorescence probe review; cyanate polymn kinetics phosphorescence probe review

IT Phosphorescent substances  
 (phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

IT Epoxy resins, processes  
 Polycyanurates  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

IT Polymerization kinetics  
 (photopolymn.; phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

IT Polymerization kinetics  
 (thermal; phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

IT 140849-51-0  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

IT 79-10-7D, Acrylic acid, derivs.  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (phosphorescence probes for monitoring kinetics of thermal and photochem. polymerization)

RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L16 ANSWER 34 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:575019 CAPLUS

DN 129:316570

ED Entered STN: 10 Sep 1998

TI Recent development in the study of water-soluble polymerization photoinitiators

AU Yang, Jianwen; Chen, Yonglie

CS Institute of Polymers, Zhongshan University, Canton, 510275, Peop. Rep. China

SO Gaofenzi Tongbao (1997), (3), 154-161

CODEN: GATOE5; ISSN: 1003-3726

PB Huaxue Gongye Chubanshe

DT Journal; General Review

LA Chinese

CC 35-0 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 67

AB A review with 47 refs. on recent development in the study of water-soluble polymerization photoinitiators including the following types of water-soluble photoinitiators: aromatic ketone, condensed aromatic hydrocarbon, polysilane derivs., acylphosphonate salt, azo, and organometallic complex types of photoinitiators.

ST review water soluble polymn photoinitiator

IT Ketones, uses

RL: CAT (Catalyst use); USES (Uses)

(aromatic; recent development in study of water-soluble polymerization photoinitiators)



IT Polymerization catalysts  
 (photopolymer.; recent development in study of water-soluble  
 polymerization photoinitiators)

IT Aromatic hydrocarbons, uses  
 Azo compounds  
 Organometallic compounds  
 Polysilanes  
 RL: CAT (Catalyst use); USES (Uses)  
 (recent development in study of water-soluble polymerization  
 photoinitiators)

IT 13598-36-2D, Phosphonic acid, acyl derivs., esters or salts  
 RL: CAT (Catalyst use); USES (Uses)  
 (recent development in study of water-soluble polymerization  
 photoinitiators)

L16 ANSWER 35 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1998:546022 CAPLUS  
 DN 129:142618  
 ED Entered STN: 28 Aug 1998  
 TI Use for stereophotolithography - a liquid composition photocrosslinkable  
 by cationic means containing a photoprimer from onium salts or  
 organometallic complexes  
 IN Karrer, Philippe  
 PA Rhodia Chimie, Fr.  
 SO Fr. Demande, 37 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 IC ICM C08L083-06  
 ICS C08K005-55; C08K005-56; C08J003-24; G03F007-075  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2757530	A1	19980626	FR 1996-16237	19961224
	WO 9828663	A1	19980702	WO 1997-FR2362	19971219
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9855653	A	19980717	AU 1998-55653	19971219
PRAI	FR 1996-16237	A	19961224		
	WO 1997-FR2362	W	19971219		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2757530	ICM	C08L083-06
	ICS	C08K005-55; C08K005-56; C08J003-24; G03F007-075
	IPCI	C08L0083-06 [ICM,6]; C08L0083-00 [ICM,6,C*]; C08K0005-55 [ICS,6]; C08K0005-56 [ICS,6]; C08K0005-00 [ICS,6,C*]; C08J0003-24 [ICS,6]; G03F0007-075 [ICS,6]
	IPCR	C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08K0005-55 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
	ECLA	C08K005/00P2+L83/06; C08K005/55; G03F007/00S; G03F007/029; G03F007/038
WO 9828663	IPCI	G03C0009-08 [ICM,6]; G03C0009-00 [ICM,6,C*]; G03F0007-038 [ICS,6]; C08K0005-00 [ICS,6]; C08K0005-55 [ICS,6]; G03F0007-029 [ICS,6]
	IPCR	C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08K0005-55

[I,A]; G03F0007-00 [I,C\*]; G03F0007-00 [I,A];  
G03F0007-029 [I,C\*]; G03F0007-029 [I,A]; G03F0007-038  
[I,C\*]; G03F0007-038 [I,A]  
ECLA C08K0005/00P2+L83/06; C08K0005/55; G03F0007/00S;  
G03F0007/029; G03F0007/038  
AU 9855653 IPCI G03C0009-08 [ICM,6]; G03C0009-00 [ICM,6,C\*];  
G03F0007-038 [ICS,6]; C08K0005-00 [ICS,6]; C08K0005-55  
[ICS,6]; G03F0007-029 [ICS,6]  
IPCR C08K0005-00 [I,C\*]; C08K0005-00 [I,A]; C08K0005-55  
[I,A]; G03F0007-00 [I,C\*]; G03F0007-00 [I,A];  
G03F0007-029 [I,C\*]; G03F0007-029 [I,A]; G03F0007-038  
[I,C\*]; G03F0007-038 [I,A]  
OS MARPAT 129:142618  
AB The title composition comprises: (1) a monomer and/or an oligomer and/or a  
polymer containing  $\geq 1$  heterocyclic group having  $\geq 1$  electron  
donor atom selected from O, S, N, and P and containing  $\geq 1$  ethylenically  
unsatd. group substituted by an electron donor atom which increases the  
 $\pi$  basicity of the system, the heterocyclic and ethylenically unsatd.  
groups being the cationic cross linking points; and (2) necessary quantity  
of a cationic polymer starter containing, a photopolymerizable group  
where the product is selected from an onium borate of an element selected  
from the groups 15-17 of the periodic table or an organometallic  
complex of an element of the groups 4-10. The cationic entity of (2) is  
selected from: (i) an onium salt of the formula  $[R_1n-A-R_2m]^+$  [A = element  
of the groups 15-17, for example I, S, Se, P, N; R1 = carboxylic or  
heterocyclic aryl, the heterocyclic group containing N or S; R2 = alkyl or  
alkenyl; R1 and R2 may be substituted by an alkoxy, alkyl nitro, chloro,  
bromo, cyano, carboxy, ester or mercapto group;  $n = 1-(v + 1)$ , v = valency  
of A;  $m = 0-(v - 1)$ ]; (ii) an oxoisothiochromanium salt; (iii) a sulfonium  
salt  $Ar_1Ar_2Ar_3S^+-Y^-(S+Ar_1Ar_2Ar_3)^t$  [ $Ar_1-Ar_3 = Ph$ , naphthyl optionally  
substituted; t = 0 or 1 with certain conditions]; and (iv) an  
organometallic salt  $(L_1L_2L_3M)^+q$  [M = metal from groups 4-10  
particularly Fe, Mn, Cr, Co; L1 = ligand from alkyl; cyclopentadienyl,  
cycloheptatrienyl, aromatic group; L2 = ligand from cycloheptatrienyl, aromatic  
group; L3 = CO, NO2]. The borate entity has the formula  $[BXaRb]^-$  [a, b =  
0-3; b = 1-4; a + b = 4; X = Cl, F (with a = 0-3), or OH with a = 0-2; R =  
substituted Ph; aromatic group having 2 nuclei]. The compound (1) may be a  
polysiloxane. The method fabrication of a 3-dimensional object comprises  
activation of the photopolymerizable composition by actinic radiation  
in multiple layers. The system polymerizes rapidly with low energy  
consumption.  
ST stereo photolithog photocrosslinkable photopolymerizable compn;  
cationic photoprimer onium salt organometallic compd  
IT Onium compounds  
Polysiloxanes, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(liquid composition for stereophotolithog. photocrosslinkable by cationic  
means containing a photoprimer from onium salts or organometallic  
complexes)  
IT Polymerization catalysts  
(photopolymn.; liquid composition for stereophotolithog.  
photocrosslinkable by cationic means containing a photoprimer from onium  
salts or organometallic complexes)  
IT Photolithography  
(stereo-; liquid composition for stereophotolithog. photocrosslinkable by  
cationic means containing a photoprimer from onium salts or  
organometallic complexes)  
IT 153699-26-4 157199-75-2 158521-03-0D, trimethylsilyl-terminated  
203573-06-2  
RL: NUU (Other use, unclassified); USES (Uses)  
(liquid composition for stereophotolithog. photocrosslinkable by cationic  
means containing a photoprimer from onium salts or organometallic  
complexes)

AN 1998:434114 CAPLUS  
 DN 129:68043  
 ED Entered STN: 15 Jul 1998  
 TI Photoinitiated radical vinyl polymerization  
 AU Reetz, Ivo; Yagci, Yusuf; Mishra, Munmaya K.  
 CS Department of Chemistry, Istanbul Technical University, Istanbul, Turk.  
 SO Plastics Engineering (New York) (1998), 48 (Handbook of Radical Vinyl  
 Polymerization), 149-201  
 CODEN: PLENEZ; ISSN: 1040-2527  
 PB Marcel Dekker, Inc.  
 DT Journal; General Review  
 LA English  
 CC 35-0 (Chemistry of Synthetic High Polymers)  
 AB A review with 280 refs. discusses photochem. radical polymerization with  
 emphasis  
 on the mechanism of photochem. polymerization, Type I and Type II initiators,  
 dye-sensitized initiation, organometallic initiators, and  
 macromol. photoinitiators.  
 ST review photochem radical polymn initiation; catalyst photochem vinyl  
 polymn review  
 IT Polymerization  
 Polymerization catalysts  
 (photopolymn.; mechanism and initiation systems for  
 photochem. radical vinyl polymerization)  
 IT Polymerization  
 Polymerization catalysts  
 (radical; mechanism and initiation systems for photochem. radical vinyl  
 polymerization)  
 RE.CNT 282 THERE ARE 282 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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TI Preparation of polyionic polymers for use as photoinitiators

IN Vallee, Alain; Armand, Michel; Ollivrin, Xavier; Michot, Christophe

PA Hydro-Quebec, Can.; Centre National De La Recherche Scientifique (Cnrs)  
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 DT Patent  
 LA French  
 IC ICM C07C311-48  
 ICS C08F014-16; C08F028-02; C08G077-04; G03F007-029; G03F007-039  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
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PI	EP 834502	A2	19980408	EP 1997-402311	19971002
	EP 834502	A3	20031008		
	EP 834502	B1	20051228		
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PRAI	CA 1996-2187046	A	19961003		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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	ICS	C08F014-16; C08F028-02; C08G077-04; G03F007-029; G03F007-039
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	ECLA	<p> C07C307/02; G03F007/039; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029 </p>
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 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00  
 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*];  
 C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12  
 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A];  
 C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00  
 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A];  
 G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039  
 [I,A]; G03F0007-039 [I,C\*]  
 NCL 522/031.000  
 ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12;  
 C08F002/50; C08F008/44; C08G077/392; C08G077/398;  
 G03F007/029; G03F007/039  
 US 6008265 IPCI C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C\*];  
 C08F0004-42 [ICS,6]; C08F0004-00 [ICS,6]; G03C0001-52  
 [ICS,6]  
 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00  
 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*];  
 C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12  
 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A];  
 C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00  
 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A];  
 G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039  
 [I,A]; G03F0007-039 [I,C\*]  
 NCL 522/025.000; 430/270.100; 522/015.000; 522/018.000;  
 522/029.000; 522/031.000; 522/032.000; 522/035.000;  
 522/059.000; 522/079.000; 522/153.000; 522/160.000;  
 522/167.000; 522/168.000; 522/169.000; 522/170.000;  
 522/173.000; 522/180.000; 522/181.000; 522/184.000;  
 522/188.000; 522/189.000  
 ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12;  
 C08F002/50; C08F008/44; C08G077/392; C08G077/398;  
 G03F007/029; G03F007/039

AB The title polymers, especially useful in the production of photoresists,  
 contain

onium groups (iodonium, sulfonium, diazonium, organometallic  
 cations) associated with anions of specified structure. Polystyrene (mol.  
 weight 6000) was iodinated, oxidized by H<sub>2</sub>O<sub>2</sub>-AcOH-Ac<sub>2</sub>O to give an iodoso.  
 acetate, treated (10 g) with 30 mL MeSO<sub>3</sub>H and 5 mL PhOBu at 0° for  
 4 h, and the resulting polyiodonium methanesulfate was stirred (8 g) with  
 10 g (C<sub>4</sub>F<sub>9</sub>SO<sub>2</sub>)<sub>2</sub>N<sup>-</sup> Li<sup>+</sup> in H<sub>2</sub>O for 1 h to give a polyiodonium  
 bis(nonafluorobutanesulfonyl)imide. Use of the onium polymers in pos.  
 and neg. photoresists is exemplified.

ST cationic polyelectrolyte photoinitiator; iodonium polymer photoinitiator;  
 onium polymer photoinitiator; photoresist photoinitiator onium polymer;  
 polystyrene iodonium salt deriv; sulfonylimide salt iodonium polymer

IT Polyelectrolytes

RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)

(cationic; preparation of polyionic polymers for use as photoinitiators)

IT Polysiloxanes, preparation

RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or  
 engineered material use); PREP (Preparation); USES (Uses)

(ferrocenylpropyl, iodonium derivs., disulfonylimide salts; preparation of polyionic polymers for use as photoinitiators)

IT Onium compounds  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (iodonium, polymers; preparation of polyionic polymers for use as photoinitiators)

IT Polymerization catalysts  
 (photopolymn.; preparation of polyionic polymers for use as photoinitiators)

IT Diazonium compounds  
 Onium compounds  
 Organometallic compounds  
 Sulfonium compounds  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymers; preparation of polyionic polymers for use as photoinitiators)

IT Polythioethers  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with phenacyl bromide)

IT Negative photoresists  
 Positive photoresists  
 (preparation of polyionic polymers for use as photoinitiators in photoresists)

IT 205042-36-ODP, 1,3-Bis(bromomethyl)benzene-2,2'-oxybis-1-ethanethiol copolymer, reaction products with (bromoacetyl)(octyloxy)benzene, tris(trifluoromethanesulfonyl)methane salts  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with phenacyl bromide)

IT 18370-86-OP, 2-Phenoxyethyl vinyl ether  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)

IT 70-11-1DP, Phenacyl bromide, reaction products with polythioethers, disulfonylimide salts 100-66-3DP, Anisole, reaction products with iodinated polystyrene, disulfonylimide salts 1126-79-ODP, Butoxybenzene, reaction products with iodinated polystyrene; disulfonylimide salts 2712-78-9DP, reaction products with Bu methacrylate-vinylferrocene copolymer, disulfonylimide salts 9003-53-6DP, onium derivs., disulfonylimide salts 12078-20-5DP, reaction products with poly(isopropylstyrene), disulfonylimide salts 30872-09-4DP, reaction products with bromocyclopentadienyliron dicarbonyl, disulfonylimide salts 39847-37-5DP, salts with onium polymers 39847-39-7DP, Bis(nonafluorobutanesulfonyl)imide, salts with onium polymers 42765-81-1DP, reaction products with Me hydrogen siloxanes, disulfonyldiimide salts 60805-12-1DP, salts with onium polymers 64328-73-ODP, reaction products with polythioethers, disulfonylimide salts 66604-62-4DP, Butyl methacrylate-vinylferrocene copolymer, reaction products with [bis(trifluoroacetoxy)iodo]benzene, disulfonylimide salts 67290-46-4DP, 4-Diazodiphenylamine chlorozincate-formaldehyde copolymer, disulfonylimide salts 82113-65-3DP, Bis(trifluoromethanesulfonyl)imide, salts with onium polymers 86303-86-8DP, reaction products with phenyliodoso toluenesulfonate 98806-81-6DP, reaction products with poly(phenoxyethyl vinyl ether) 156118-35-3DP, Methylsilanediol-dimethylsilanediol copolymer, reaction products with allylferrocene and [bis(trifluoroacetoxy)iodo]benzene, disulfonyldiimide salts 205042-34-8P, 1,4-Bis(diacetoxyiodo)benzene-1,3-diphenylpropane copolymer tris(trifluoromethanesulfonyl)methane salt 205042-35-9DP, 1,2-Bis(2-chloroethoxy)ethane-1,6-hexanedithiol copolymer, reaction products with phenacyl bromide, disulfonylimide salts 205042-38-2P 205042-40-6P, [Bis(trifluoroacetoxy)iodo]benzene-1,2-diferrocenylethane copolymer bis(trifluoromethanesulfonyl)imide salt 205241-16-3DP, reaction products with iodonium polymers, disulfonylimide salts  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or

engineered material use); PREP (Preparation); USES (Uses)  
(preparation of polyionic polymers for use as photoinitiators)

IT 110-75-8, 2-Chloroethyl vinyl ether  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with Na phenoxide)  
IT 139-02-6, Sodium phenoxide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with chloroethyl vinyl ether)  
IT 421-85-2, Trifluoromethanesulfonamide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with sulfuryl chloride and hexafluoroisopropanol)  
IT 7791-25-5, Sulfuryl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with trifluoromethanesulfonamide and hexafluoroisopropanol)  
IT 920-66-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with trifluoromethanesulfonamide and sulfuryl chloride)

L16 ANSWER 38 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:228981 CAPLUS

DN 128:257815

ED Entered STN: 23 Apr 1998

TI Preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium  
compounds for use as photopolymerization catalysts

IN Vallee, Alain; Armand, Michel; Ollivrin, Xavier; Michot, Christophe

PA Hydro-Quebec, Can.; Centre National De La Recherche Scientifique (Cnrs)

SO Eur. Pat. Appl., 30 pp.

CODEN: EPXXDW

DT Patent

LA French

IC ICM C07C025-18

ICS C07C311-48; C07C381-12; C07F017-00; C08F220-12; C08F230-04;  
C08G077-24; G03F007-029; G03F007-039

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 25, 67, 74

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 834492	A2	19980408	EP 1997-402312	19971002
	EP 834492	A3	20031008		
	EP 834492	B1	20051228		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CA 2187046	A1	19980403	CA 1996-2187046	19961003
	CA 2218434	A1	19980403	CA 1997-2218434	19971003
	CA 2221014	A1	19980403	CA 1997-2221014	19971003
	JP 10226707	A	19980825	JP 1997-271212	19971003
	JP 10226658	A	19980825	JP 1997-271624	19971003
	US 6008267	A	19991228	US 1997-943590	19971003
	US 6008265	A	19991228	US 1997-943820	19971003
PRAI	CA 1996-2187046	A	19961003		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 834492	ICM	C07C025-18
	ICS	C07C311-48; C07C381-12; C07F017-00; C08F220-12; C08F230-04; C08G077-24; G03F007-029; G03F007-039
	IPCI	C07C0025-18 [ICM,7]; C07C0025-00 [ICM,7,C*]; C07C0311-48 [ICS,7]; C07C0311-00 [ICS,7,C*]; C07C0381-12 [ICS,7]; C07C0381-00 [ICS,7,C*]; C07F0017-00 [ICS,7]; C08F0220-12 [ICS,7]; C08F0220-00 [ICS,7,C*]; C08F0230-04 [ICS,7]; C08F0230-00 [ICS,7,C*]; C08G0077-24 [ICS,7]; C08G0077-00 [ICS,7,C*]; G03F0007-029 [ICS,7]; G03F0007-039 [ICS,7]; C08F0002-46 [ICS,7]

IPCR C07C0019-00 [I,C\*]; C07C0019-07 [I,A]; C07C0245-00 [I,C\*]; C07C0245-14 [I,A]; C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0317-00 [I,C\*]; C07C0317-02 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; C08F0004-00 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08F0112-00 [I,C\*]; C08F0112-14 [I,A]; C08G0059-00 [I,C\*]; C08G0059-68 [I,A]; C08G0075-00 [I,C\*]; C08G0075-20 [I,A]; C08G0077-00 [I,C\*]; C08G0077-08 [I,A]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; C09K0003-00 [I,C\*]; C09K0003-00 [I,A]; G03F0007-004 [I,C\*]; G03F0007-004 [I,A]; G03F0007-029 [I,C\*]; G03F0007-029 [I,A]; G03F0007-039 [I,C\*]; G03F0007-039 [I,A]

ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029; G03F007/039

CA 2187046

IPCI C07C0311-48 [ICM,6]; C07C0311-00 [ICM,6,C\*]; C07C0317-04 [ICS,6]; C07C0317-00 [ICS,6,C\*]; C07C0381-12 [ICS,6]; C07C0381-00 [ICS,6,C\*]; C07F0017-02 [ICS,6]; C07F0017-00 [ICS,6,C\*]; C08F0002-48 [ICS,6]; C08F0002-46 [ICS,6,C\*]

IPCR C07C0019-00 [I,C\*]; C07C0019-07 [I,A]; C07C0245-00 [I,C\*]; C07C0245-14 [I,A]; C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0317-00 [I,C\*]; C07C0317-02 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-46 [I,A]; C08F0002-50 [I,A]; C08F0004-00 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08F0112-00 [I,C\*]; C08F0112-14 [I,A]; C08G0059-00 [I,C\*]; C08G0059-68 [I,A]; C08G0075-00 [I,C\*]; C08G0075-20 [I,A]; C08G0077-00 [I,C\*]; C08G0077-08 [I,A]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; C09K0003-00 [I,C\*]; C09K0003-00 [I,A]; G03F0007-004 [I,C\*]; G03F0007-004 [I,A]; G03F0007-029 [I,C\*]; G03F0007-029 [I,A]; G03F0007-039 [I,C\*]; G03F0007-039 [I,A]

ECLA C07C307/02; G03F007/039; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029

CA 2218434

IPCI C07C0311-48 [ICM,6]; C07C0311-00 [ICM,6,C\*]; C08F0004-00 [ICS,6]; C08G0083-00 [ICS,6]; C07C0307-02 [ICS,6]; C07C0307-00 [ICS,6,C\*]; C07C0025-18 [ICS,6]; C07C0025-00 [ICS,6,C\*]; C08F0002-46 [ICS,6]; C07C0309-65 [ICS,6]; C07C0309-80 [ICS,6]; C07C0309-00 [ICS,6,C\*]

IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]

ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029; G03F007/039

CA 2221014

IPCI C07C0311-48 [ICM,6]; C07C0311-00 [ICM,6,C\*]; C08F0004-00 [ICS,6]; C08G0083-00 [ICS,6]; C07C0317-04 [ICS,6]; C07C0317-00 [ICS,6,C\*]; C07C0381-12 [ICS,6]; C07C0381-00 [ICS,6,C\*]; C08J0003-28 [ICS,6]; C08F0008-34 [ICS,6]; C08F0008-00 [ICS,6,C\*];

C08F0002-46 [ICS,6]  
 JP 10226707 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]  
 ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029; G03F007/039  
 JP 10226658 IPCI C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C\*]; C08F0112-14 [ICS,6]; C08F0112-00 [ICS,6,C\*]; C08G0059-68 [ICS,6]; C08G0059-00 [ICS,6,C\*]; C08G0075-20 [ICS,6]; C08G0075-00 [ICS,6,C\*]; C08G0077-08 [ICS,6]; C08G0077-00 [ICS,6,C\*]  
 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]  
 JP 10226658 IPCI C07C0019-07 [ICM,6]; C07C0019-00 [ICM,6,C\*]; C07C0245-14 [ICS,6]; C07C0245-00 [ICS,6,C\*]; C07C0311-48 [ICS,6]; C07C0311-00 [ICS,6,C\*]; C07C0317-02 [ICS,6]; C07C0317-00 [ICS,6,C\*]; C07C0381-12 [ICS,6]; C07C0381-00 [ICS,6,C\*]; C08F0002-50 [ICS,6]; C08F0002-46 [ICS,6,C\*]; C09K0003-00 [ICS,6]  
 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]  
 US 6008267 IPCI C08F0002-46 [ICM,6]  
 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]  
 NCL 522/031.000  
 ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12; C08F002/50; C08F008/44; C08G077/392; C08G077/398; G03F007/029; G03F007/039  
 US 6008265 IPCI C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C\*]; C08F0004-42 [ICS,6]; C08F0004-00 [ICS,6]; G03C0001-52 [ICS,6]  
 IPCR C07C0307-00 [I,C\*]; C07C0307-02 [I,A]; C07C0309-00 [I,C\*]; C07C0309-80 [I,A]; C07C0311-00 [I,C\*]; C07C0311-48 [I,A]; C07C0381-00 [I,C\*]; C07C0381-12 [I,A]; C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0008-00 [I,C\*]; C08F0008-44 [I,A]; C08G0077-00 [I,C\*]; C08G0077-392 [I,A]; C08G0077-398 [I,A]; G03F0007-029 [I,A]; G03F0007-029 [I,C\*]; G03F0007-039 [I,A]; G03F0007-039 [I,C\*]  
 NCL 522/025.000; 430/270.100; 522/015.000; 522/018.000;

522/029.000; 522/031.000; 522/032.000; 522/035.000;  
 522/059.000; 522/079.000; 522/153.000; 522/160.000;  
 522/167.000; 522/168.000; 522/169.000; 522/170.000;  
 522/173.000; 522/180.000; 522/181.000; 522/184.000;  
 522/188.000; 522/189.000  
 ECLA C07C307/02; C07C309/80; C07C311/48; C07C381/12;  
 C08F002/50; C08F008/44; C08G077/392; C08G077/398;  
 G03F007/029; G03F007/039

- OS MARPAT 128:257815
- AB Fluorosulfonylimides and fluorosulfonylmethylides of onium compds. (iodonium, sulfonium, diazonium, organometallic, optionally polymeric) are prepared for use as photoinitiators, especially useful in photoresists. Stirring 15 g KN(SO<sub>2</sub>F)<sub>2</sub> with 21 g Ph<sub>2</sub>ICl in H<sub>2</sub>O at 0° in the absence of light for 1 h gave 91% Ph<sub>2</sub>I<sup>+</sup> (SO<sub>2</sub>F)<sub>2</sub>N<sup>-</sup>. Use of the products as photoinitiators in photoresists is exemplified.
- ST fluorosulfonylimide onium catalyst photopolymer; photoresist catalyst photopolymer; bisfluorosulfonylimide diphenyliodonium catalyst photopolymer; iodonium fluorosulfonylimide catalyst photopolymer
- IT Organometallic compounds  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 ((fluorosulfonyl)imidates; preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)
- IT Polysiloxanes, preparation  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (iodonium fluorosulfonylimide group-containing; preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)
- IT Onium compounds  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (iodonium, (fluorosulfonyl)imidates; preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)
- IT Polymerization catalysts  
 (photopolymer.; preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)
- IT Diazonium compounds  
 Sulfonium compounds  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymers; preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)
- IT Negative photoresists  
 Positive photoresists  
 (preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts in photoresists)
- IT Polythioethers  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with phenacyl bromide and K bis(fluorosulfonyl)imide)
- IT 18908-66-2, 2-Ethylhexyl bromide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (Grignard reaction with bromobenzene)
- IT 205247-59-2P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with K bis(fluorosulfonyl)imide)
- IT 5617-39-0P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with Na iodide and iodic anhydride)

IT 205057-03-0P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with diphenyliodonium chloride)

IT 70-11-1DP, Phenacyl bromide, reaction products with polythioethers.  
 bis(fluorosulfonyl)imide salts 2712-78-9DP, reaction products with Bu methacrylate-vinylferrocene copolymer, bis(fluorosulfonyl)imide salts 12156-05-7DP, 1,2-Diferrocenylethane, reaction products with [bis(trifluoroacetoxy)iodo]benzene and K bis(fluorosulfonyl)imide 66604-62-4DP, Butyl methacrylate-vinylferrocene copolymer, reaction products with [bis(trifluoroacetoxy)iodo]benzene and K bis(fluorosulfonyl)imide 75236-31-6DP, reaction products with potassium fluorosulfonylimides 156118-35-3DP, Dimethylsilanediol-methylsilanediol copolymer, reaction products with (allyloxyphenyl)phenyliodonium bis(fluorosulfonyl)imide 205042-35-9DP, reaction products with phenacyl bromide, fluorosulfonylimide salts 205042-38-2P 205057-02-9P 205057-05-2P 205057-06-3P 205057-08-5P 205057-10-9P 205057-12-1P 205057-13-2P 205057-14-3P 205247-60-5DP, reaction products with Me hydrogen polysiloxanes  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)

IT 205247-60-5P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymer. catalysts)

IT 98806-81-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with (allyloxy)benzene)

IT 12029-98-0, Iodine oxide (I2O5)  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with (ethylhexyl)benzene and Na iodide)

IT 7681-82-5, Sodium iodide, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with (ethylhexyl)benzene and iodic anhydride)

IT 1483-72-3, Diphenyliodonium chloride 32760-80-8, Irgacure 261 125604-88-8, [(4-Octyloxy)phenyl]phenyliodonium tosylate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with K bis(fluorosulfonyl)imide)

IT 100669-96-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Li trifluoroethoxide)

IT 69163-14-0, Lithium 2,2,2-trifluoroethoxide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Na bis(fluorosulfonyl)imide)

IT 523-27-3, 9,10-Dibromoanthracene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Na phenoxide, bromobutane and K tris(fluorosulfonyl)methide)

IT 109-65-9, 1-Bromobutane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Na phenoxide, dibromoanthracene and K tris(fluorosulfonyl)methide)

IT 75533-69-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with Na phenoxide, dibromoanthracene and bromobutane)

IT 31904-29-7, Butylferrocene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with bromine, [bis(trifluoroacetoxy)iodo]benzene and K bis(fluorosulfonyl)imide)

IT 139-02-6, Sodium phenoxide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with dibromoanthracene, bromobutane and K tris(fluorosulfonyl)methide)



IT 108-86-1, Bromobenzene, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with ethylhexylmagnesium bromide)

IT 14984-76-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with onium compds.)

IT 1746-13-0, (Allyloxy)benzene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with phenyliodoso toluenesulfonate)

IT 205057-09-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with potassium bis(fluorosulfonyl)imidate)

IT 421-85-2, Trifluoromethanesulfonamide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with sulfuryl chloride and hexafluoroisopropanol)

IT 7791-25-5, Sulfuryl chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with trifluoromethanesulfonamide and hexafluoroisopropanol)

IT 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction with trifluoromethanesulfonamide and sulfuryl chloride)

L16 ANSWER 39 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:155300 CAPLUS

DN 128:198580

ED Entered STN: 14 Mar 1998

TI Optical storage effect in a platinum ortho-metalated liquid crystal

AU Buey, J.; Diez, L.; Espinet, P.; Kitzerow, H. S.; Miguel, J. A.

CS Ewan-N.-Stranski-Institut, Technische Universitaet Berlin, Berlin,  
 D-10623, Germany

SO Applied Physics B: Lasers and Optics (1998), 66(3), 355-358  
 CODEN: APBOEM; ISSN: 0946-2171

PB Springer-Verlag

DT Journal

LA English

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 75

AB We have studied the optical storage capability of an  
 organometallic Pt compound which forms a glass-like liquid crystalline  
 state on cooling from the cholesteric phase. Local heating of the sample  
 by a laser beam causes a reorientation of the liquid crystal and thus  
 induces an optical contrast which is stable after the exposure. The  
 holog. formation of grating structures and digital image storage  
 were examined

ST optical storage platinum complex liq crystal; holog memory  
 platinum complex liq crystal

IT Optical memory devices  
 (digital; optical storage effect and digital image storage in liquid  
 crystalline Pt complex with glass-like state)

IT Holographic memory devices  
 (optical storage effect and digital image storage in liquid crystalline Pt  
 complex with glass-like state)

IT Glass transition  
 Liquid crystals  
 Optical recording materials  
 (optical storage effect and holog. grating formation and  
 digital image storage in liquid crystalline Pt complex with glass-like  
 state)

IT Holographic diffraction gratings  
 Holographic recording materials  
 (optical storage effect including holog. grating formation  
 and digital image storage in liquid crystalline Pt complex with glass-like  
 state)

IT 180199-61-5

RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (optical storage effect and holog. grating formation and digital image storage in liquid crystalline Pt complex with glass-like state)

L16 ANSWER 40 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:84662 CAPLUS  
DN 128:102406  
ED Entered STN: 13 Feb 1998  
TI Photoinitiation of free radical polymerization by organometallic compounds  
AU Aliwi, Salah M.  
CS Department of Chemistry, College of Science, Mustansiriyah University, Baghdad, Iraq  
SO Handbook of Engineering Polymeric Materials (1997), 243-258. Editor(s): Cheremisinoff, Nicholas P. Publisher: Dekker, New York, N. Y.  
CODEN: 65OVA6  
DT Conference; General Review  
LA English  
CC 35-0 (Chemistry of Synthetic High Polymers)  
AB A review with 70 refs. on the free radical polymerization initiated by organometallic compds., including transition metal carbonyl complexes, transition metal chelates, and other metal complexes.  
ST radical photopolymerization organometallic compd catalyst review  
IT Polymerization  
Polymerization  
Polymerization catalysts  
Polymerization catalysts  
(photochem., radical; photoinitiation of free radical polymerization by organometallic compds.)  
IT Organometallic compounds  
RL: CAT (Catalyst use); USES (Uses)  
(photoinitiation of free radical polymerization by organometallic compds.)

RE.CNT 70 THERE ARE 70 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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L16 ANSWER 41 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:616944 CAPLUS

DN 127:249077

ED Entered STN: 27 Sep 1997

TI Substrate coated or impregnated with photopolymerizable epoxy composition for tape backing or chip-resistant paint film

IN Kinzer, Kevin E.; Holland, Lowell W.; Sridhar, Krishnamurthy; Kellen, James N.; Pribnow, Richard W.

PA Minnesota Mining and Manufacturing Co., USA

SO U.S., 9 pp., Cont.-in-part of U.S. Ser. No. 958,930, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08G059-14

ICS B32B027-38

INCL 428413000

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 5667893	A	19970916	US 1994-191601	19940204
	CN 1086626	A	19940511	CN 1993-118640	19931008
	CA 2181256	A1	19950810	CA 1994-2181256	19941213
	WO 9521207	A1	19950810	WO 1994-US14346	19941213
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 742804	A1	19961120	EP 1995-905920	19941213
	EP 742804	B1	20000426		
	R: DE, FR, GB, IT				
PRAI	US 1992-958930	B2	19921009		
	US 1994-191601	A	19940204		
	WO 1994-US14346	W	19941213		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 5667893	ICM	C08G059-14
	ICS	B32B027-38
	INCL	428413000
	IPCI	C08G0059-14 [ICM,6]; C08G0059-00 [ICM,6,C*]; B32B0027-38 [ICS,6]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]; C09J0133-00 [I,C*]; C09J0133-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]; H01B0003-40 [I,C*]; H01B0003-40 [I,A]
	NCL	428/413.000; 106/287.180; 106/287.220; 428/345.000; 522/016.000; 522/022.000; 522/066.000; 522/170.000; 525/524.000; 528/103.000
	ECLA	C08G059/14K2C; C08G059/22B; C08G059/24; C08G059/38; C08G059/68; C09D163/00; C09J007/02K9F; C09J007/04K; H01B003/40
CN 1086626	IPCI	H01B0003-40 [ICM,5]; H01B0003-08 [ICS,5]; H01B0003-02 [ICS,5,C*]; H01B0003-48 [ICS,5]; H01B0003-18 [ICS,5,C*]; H01B0017-56 [ICS,5]; C09D0163-00 [ICS,5]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]; C09J0133-00 [I,C*]; C09J0133-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]; H01B0003-40 [I,C*]; H01B0003-40 [I,A]
CA 2181256	IPCI	C09D0005-32 [ICM,6]; C09D0163-00 [ICS,6]
	IPCR	B32B0027-38 [I,C*]; B32B0027-38 [I,A]; C08G0059-00 [I,C*]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]
WO 9521207	IPCI	C08G0059-22 [ICM,6]; C09D0163-00 [ICS,6]; C08G0059-68 [ICS,6]; C08G0059-00 [ICS,6,C*]
	IPCR	B32B0027-38 [I,C*]; B32B0027-38 [I,A]; C08G0059-00 [I,C*]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C09D0163-00 [I,C*]; C09D0163-00

[I,A]  
ECLA C08G059/22B; C08G059/24; C08G059/38; C08G059/68;  
C09D163/00  
EP 742804 IPCI C08G0059-22 [ICM,6]; C09D0163-00 [ICS,6]; C08G0059-68  
[ICS,6]; C08G0059-00 [ICS,6,C\*]  
AB An article (such as flexible tape backing and chip-resistant paint)  
comprises a substrate which has coated or impregnated with a  
photopolymerizable epoxy composition containing a plurality of epoxides  
selected from  $\geq 1$  bisphenol A epoxides and cycloaliph. epoxides, and  
 $\geq 1$  aliphatic epoxide; 0.1-2%  $\geq 1$  organometallic  
cationic initiator capable of initiating polymerization at wavelengths of from  
200-600 nm; and optionally accelerating agent. Thus, bis(3,4-  
epoxycyclohexyl) adipate (ERL 4299) 60.0, Heloxy 84 (polyglycidyl ether of  
an aliphatic polyol) 40, ( $\eta 5$ -cyclopentadienyl)( $\eta 6$ -xylene) iron(1+)  
hexafluoroantimonate 1.0 and hydroperoxide 1.5 part were mixed, and a  
glass-cloth substrate was impregnated with the mixture, and subjected to UV  
rays in 180-420 nm for  $< 10$  s to give backing material showing insulation  
resistance  $3 \times 10^{14}$  ohms; tensile strength 330 N/cm and elongation 5.4%,  
which was further coated with a rubber based adhesive to form a adhesive  
tape used for elec. insulation.  
ST tape backing paint film photopolymerizable epoxy; bisphenol  
cycloaliph aliph epoxy photopolymerizable compn;  
organometallic complex salt epoxy photopolymn catalyst  
IT Coating materials  
(chip-resistant, chip-resistant; substrate coated or impregnated with  
photopolymerizable epoxy composition)  
IT Organometallic compounds  
RL: MOA (Modifier or additive use); USES (Uses)  
(complex, ionic salt. photoinitiator; substrate coated or impregnated  
with photopolymerizable epoxy composition)  
IT Polymerization catalysts  
(photopolymn.; substrate coated or impregnated with  
photopolymerizable epoxy composition for tape backing and  
chip-resistant paint)  
IT Epoxy resins, uses  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); TEM (Technical or engineered material use); PROC (Process);  
USES (Uses)  
(substrate coated or impregnated with photopolymerizable  
epoxy composition)  
IT Materials  
(tapes, backing; substrate coated or impregnated with  
photopolymerizable epoxy composition for)  
IT Electric insulators  
(tapes; substrate coated or impregnated with photopolymerizable  
epoxy composition for)  
IT 92140-34-6 154799-07-2  
RL: MOA (Modifier or additive use); USES (Uses)  
(photoinitiator; substrate coated or impregnated with  
photopolymerizable epoxy composition for tape backing and  
chip-resistant paint)  
IT 163963-87-9 163963-88-0 195834-82-3  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
formulation); TEM (Technical or engineered material use); PROC (Process);  
USES (Uses)  
(substrate coated or impregnated with photopolymerizable  
epoxy composition for tape backing and chip-resistant paint)  
L16 ANSWER 42 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:462343 CAPLUS  
DN 127:183211  
ED Entered STN: 24 Jul 1997  
TI Optical and Mossbauer study of the real time holographic  
organometallic material Fe:PVA  
AU Kuncser, V.; Avramescu, A.; Filoti, G.; Rotaru, P.; Podgorsek, R.;

Biebricher, M.; Franke, H.  
 CS Inst. Physics and Technology of Materials, Bucharest, Rom.  
 SO Journal of Alloys and Compounds (1997), 256(1-2), 269-275  
 CODEN: JALCEU; ISSN: 0925-8388  
 PB Elsevier  
 DT Journal  
 LA English  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 73  
 AB The Fe:PVA thin films were studied by optical and Mossbauer spectroscopy.  
 Both the absorption and Mossbauer spectra are dependent on the PVA dilution  
 and ferric chloride concentration. A strong correlation between the optical and  
 Mossbauer results was found, indicating the major role of the iron  
 electronic local levels in the optical phenomena. A relation between the  
 various absorption probabilities and also indirect information about the  
 Debye temps. were obtained.  
 ST ferric chloride doped polyvinyl alc holog; Mossbauer spectra  
 iron doped polyvinyl alc  
 IT Mossbauer effect  
 (of real time holog. organometallic material ferric  
 chloride-doped poly(vinyl alc.))  
 IT Holographic recording materials  
 UV and visible spectra  
 (optical and Mossbauer study of real time holog.  
 organometallic material ferric chloride-doped poly(vinyl alc.))  
 IT 7705-08-0, Ferric chloride, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (optical and Mossbauer study of real time holog.  
 organometallic material ferric chloride-doped poly(vinyl alc.))  
 IT 9002-89-5, Poly(vinyl alcohol)  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES  
 (Uses)  
 (optical and Mossbauer study of real time holog.  
 organometallic material ferric chloride-doped poly(vinyl alc.))  
 L16 ANSWER 43 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1997:452409 CAPLUS  
 DN 127:212319  
 ED Entered STN: 19 Jul 1997  
 TI Photocatalysis and promoted photocatalysis during photocrosslinking of  
 multifunctional acrylates in composite membranes immobilizing titanium  
 dioxide  
 AU Bellobono, Ignazio Renato; Morelli, Roberto; Chiodaroli, Claudia Maria  
 CS Department of Physical Chemistry and Electrochemistry, University of  
 Milan, via C. Golgi, 19, I-20133, Milan, Italy  
 SO Journal of Photochemistry and Photobiology, A: Chemistry (1997), 105(1),  
 89-94  
 CODEN: JPPCEJ; ISSN: 1010-6030  
 PB Elsevier  
 DT Journal  
 LA English  
 CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 35, 36, 67  
 AB The photocatalytic activities of semiconductor titanium dioxide (added to  
 a standard titanium dioxide pigment) and five organometallic  
 coordination compds. (containing cobalt(III) and vanadium(V) as central atoms)  
 have been investigated during the photopolymerization and  
 photocrosslinking of acrylic monomers, employed for the preparation of  
 composite membranes by photo-grafting onto a non-woven polyester support.  
 By partly or wholly substituting the 30 weight% titanium dioxide pigment with  
 a semiconductor grade dioxide, the rate of decrease of unsatn. increases  
 (by more than two orders of magnitude when substitution is complete). A  
 strong photocatalytic activity is also shown by vanadium complexes. The

rate of decrease of unsatn. can be fitted to a relaxation spectrum, the width of which depends on the chemical nature of the polymer network. The mean lifetime is a very sensitive measure of the photocatalytic effect. Multi-functional acrylic monomers (butanediol diacrylate, 1,6-hexanediol diacrylate and pentaerythritol triacrylate) are photoinitiated by 1,2-diphenyl-2,2-dimethoxyethanone in the presence of semiconductor and pigment grade titanium dioxide blends by the addition of organometallic coordination compds. as photocatalytic promoters. The results obtained in this investigation are in line with the relaxation model described above (also used successfully in previous studies), which interprets the photochem. reactivity during photocrosslinking in the presence and absence of photocatalytic promoters acting as efficient chain transfer agents. The photoinitiator 1,2-diphenyl-2,2-dimethoxyethanone alone is unable to carry out satisfactory polymerization in the presence of massive amts. of pigment grade titanium dioxide in the absence of semiconductor grade dioxide. The latter enhances strongly the rate of crosslinking, which is further increased by photocatalytic promoters.

- ST photocatalyst titanium dioxide organometallic coordination compd; photopolymn photocrosslinking acrylic monomer composite membrane; composite membrane photografting nonwoven polyester support
- IT Polymerization  
(graft; photocatalytic activities of titanium dioxide and organometallic coordination compds. for preparation of composite membranes by photo-grafting onto non-woven polyester support)
- IT Photolysis catalysts  
(photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT Coordination compounds  
Organometallic compounds  
RL: CAT (Catalyst use); USES (Uses)  
(photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT Crosslinking  
(photochem.; photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT Polymerization  
(photopolymn.; photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT 1686-22-2, Triethylvanadate 1686-24-4, Tri-(tert-butyl)-vanadate 5588-84-1, Tri-(isopropyl)-vanadate 13463-67-7, Titanium dioxide, uses 19631-94-8 23602-28-0 36300-65-9  
RL: CAT (Catalyst use); USES (Uses)  
(photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT 1070-70-8, 1,4-Butanediol diacrylate 3524-68-3, Pentaerythritol triacrylate 13048-33-4, 1,6-Hexanediol diacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)
- IT 24650-42-8, 1,2-Diphenyl-2,2-dimethoxyethanone  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photoinitiator; photocatalytic activities of titanium dioxide and organometallic coordination compds. studied during photopolymn. and photocrosslinking of acrylic monomers)

TI Photocatalytic and photoinitiating properties of iron  
 organometallic complexes in solution and aromatic dicyanate esters  
 AU Jakubek, Vladimir; Lees, Alistair J.; Fuerniss, Stephen J.; Papathomas,  
 Kostas I.  
 CS Dep. Chem., State Univ. New York, Binghamton, NY, 13902-6016, USA  
 SO Polymer Preprints (American Chemical Society, Division of Polymer  
 Chemistry) (1997), 38(1), 195-196  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PB American Chemical Society, Division of Polymer Chemistry  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37, 67  
 AB The photocatalytic and photoinitiating properties of  
 organometallic [CpFe( $\eta^6$ -arene)]PF<sub>6</sub> complexes with bisphenol E  
 dicyanate (AroCy L 10) system were studied, where, Cp =  $\eta^5$ -C<sub>5</sub>H<sub>5</sub>, arene  
 = benzene, toluene, naphthalene, and pyrene. Photochem. quantum  
 efficiencies for the arene dissociation reaction have been measured for the  
 complexes following excitation at 366 nm. The obtained quantum  
 efficiencies are >1, indicating that a photocatalytic reaction takes place  
 on 366-nm excitation. The cyanate ester monomers undergo a  
 polycyclotrimerization reaction upon thermal treatment to form three  
 dimensional triazine polymer network which possess thermal and elec.  
 properties surpassing epoxies, polyimides and bismaleimide triazines.  
 ST cyclopentadiene iron complex photopolymn catalyst; bisphenol E  
 dicyanate polymn organometallic complex; photocatalytic  
 photoinitiating property cyclopentadiene iron complex  
 IT Polymerization enthalpy  
 (photocatalytic and photoinitiating properties of iron  
 organometallic complexes in solution and aromatic dicyanate esters)  
 IT Polymerization  
 Polymerization catalysts  
 (photopolymn.; photocatalytic and photoinitiating properties  
 of iron organometallic complexes in solution and aromatic dicyanate  
 esters)  
 IT 12176-31-7 33435-42-6 59183-95-8 70755-99-6  
 RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process);  
 PROC (Process); USES (Uses)  
 (photocatalytic and photoinitiating properties of iron  
 organometallic complexes in solution and aromatic dicyanate esters)  
 IT 117413-18-0P, AroCy L 10 homopolymer  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (photocatalytic and photoinitiating properties of iron  
 organometallic complexes in solution and aromatic dicyanate esters)

L16 ANSWER 45 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:509464 CAPLUS  
 DN 125:182095  
 ED Entered STN: 27 Aug 1996  
 TI Platinum Orthometalated Liquid Crystals Compared with Their Palladium  
 Analogs. First Optical Storage Effect in an Organometallic  
 Liquid Crystal  
 AU Buey, Julio; Diez, Laura; Espinet, Pablo; Kitzrow, Heinz-S.; Miguel,  
 Jesus A.  
 CS Facultad de Ciencias, Universidad de Valladolid, Valladolid, E-47005,  
 Spain  
 SO Chemistry of Materials (1996), 8(9), 2375-2381  
 CODEN: CMATEX; ISSN: 0897-4756  
 PB American Chemical Society  
 DT Journal  
 LA English  
 CC 75-11 (Crystallography and Liquid Crystals)  
 Section cross-reference(s): 29, 74  
 AB Di- $\mu$ -chlorobis( $\eta^3$ -2-methylallyl)platinum) reacts with imines HLn =  
 p-CnH<sub>2n+10</sub>-C<sub>6</sub>H<sub>4</sub>-CH:N-C<sub>6</sub>H<sub>4</sub>-OCnH<sub>2n+1</sub>-p (n = 6, n = 2) to yield the



C,N-cyclometalated Pt(II) compds.  $[\text{Pt}_2(\mu\text{-Cl})_2(\text{Ln})_2]$  (I). From I, other types of dinuclear  $[\text{Pt}_2(\mu\text{-X})_2(\text{Ln})_2]$  with X = OAc, (R)-2-chloropropionato,  $\text{SCnH}_{2n+1}$ , mixed bridged complexes  $[\text{Pt}_2(\mu\text{-X})(\mu\text{-Y})(\text{Ln})_2]$  (X = Cl, OAc, (R)-2-chloropropionato; Y =  $\text{SCnH}_{2n+1}$ ), and mononuclear  $[\text{Pt}(\text{acac})(\text{Ln})]$  were prepared, and their mesogenic properties are compared with those of their Pd analogs reported previously. The Pt compds. exhibit higher temperature transitions, unless a different composition

hides

this effect when the material is a mixture of isomers. One of the compds.,  $\text{cis-}[\text{Pt}_2(\mu\text{-X})(\mu\text{-Y})(\text{Ln})_2]$  (X = (R)-2-chloropropionato; Y =  $\text{SC}_{16}\text{H}_{33}$ ), forms a glasslike state on cooling from the cholesteric phase and shows absorption of light in the visible wavelength range. As a consequence, it is suitable for opto-optical storage effects, which were realized on the complex without the addition of dye.

ST platinum orthometalated liq crystal; optical storage platinum orthometalated liq crystal; holog information storage platinum orthometalated mesophase

IT Heat of transition

(of platinum orthometalated liquid crystals)

IT Liquid crystals

(platinum orthometalated)

IT Recording materials

(holog., platinum orthometalated liquid crystal)

IT Holography

(recording materials, platinum orthometalated liquid crystal)

IT 104945-37-1

RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(nmr spectrum and reaction with di- $\mu$ -chlorobis(methylallyl)platinum)

IT 180199-55-7P 180199-56-8P 180199-59-1P 180199-60-4P 180199-61-5P  
180199-62-6P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(preparation and liquid crystal properties of)

IT 180199-63-7P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
(preparation and liquid crystal properties suitable for optical storage)

IT 180199-53-5P 180199-54-6P 180199-57-9P 180199-58-0P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(preparation and reactant and liquid crystal properties of)

IT 180199-64-8P 180323-75-5P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reactant in liquid crystal preparation)

IT 180199-65-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation and reactant in liquid crystal preparation)

IT 180323-76-6P 180323-77-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation in liquid crystal preparation)

L16 ANSWER 46 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:412967 CAPLUS

ED Entered STN: 16 Jul 1996

TI Organometallic photochemistry; basic principles and applications to materials chemistry.

AU Tyler, David R.

CS Department Chemistry, University Oregon, Eugene, OR, 97403-1253, USA

SO Book of Abstracts, 212th ACS National Meeting, Orlando, FL, August 25-29 (1996), CHED-223 Publisher: American Chemical Society, Washington, D. C. CODEN: 63BFAF

DT Conference; Meeting Abstract

LA English

AB The basic principles of organometallic chemical will be discussed with an emphasis on the intermediates and excited states that are formed when various categories of organometallic mols. are irradiated. Specific examples will be given of how these intermediates and excited states are used in imaging systems, as photopolymn. catalysts, for the preparation of films and semiconductors, and in the study of interfaces and surfaces. The role of organometallics in photodegradable polymers will also be discussed.

L16 ANSWER 47 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1996:285717 CAPLUS  
 DN 124:344196  
 ED Entered STN: 15 May 1996  
 TI Influence of photocatalytic systems in photochemical production of composite membranes and reinforced plastics  
 AU Bellobono, Ignazio Renato  
 CS Department Physical Chemistry and Electrochemistry, University Milan, Milan, I-20133, Italy  
 SO Advances in Science and Technology (Faenza, Italy) (1995), 7(Advanced Structural Fiber Composites), 249-256  
 CODEN: ASETES  
 PB Techna  
 DT Journal  
 LA English  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 AB Photochem. production of composite membranes, which is being investigated in this series of papers, as well as that of reinforced plastics containing optically absorbing fibers, are two emerging technologies. For these two extreme situations of photopolymn. processes, many problems arise, such as the strong decrease of radiation flux with increasing depth of profile. These inconveniences cannot be met successfully by the use of standard com. photoinitiators. On the contrary, by adding to traditional photoinitiators suitable photocatalytic systems, the latter may be tailored in order to meet requirements needed for photoprodn. of composites. Performance of these systems (based on five different Co(III) and V(V) organometallic complexes) has been shown by multiple internal reflection IR spectroscopic anal., in order to evaluate the percentage of original double bonds that remained as a function of irradiation time in composite membranes immobilizing up to 30 weight% of titanium dioxide, and by measurement of hardness as a function of depth of profile in polyesters reinforced with glass fibers. A possible mechanism of action for these photocatalysts, based on their ability to transfer to radical sites, acting as oxygen carriers, as well as of enhancing, by photografting, chemical bonding between fibers, or inorg. material and polymer is discussed.

ST vanadium deriv photopolymn catalyst polyester; unsatd polyester  
 cobalt photochem polymn; crosslinking photochem catalyst cobalt vanadium  
 IT Glass fibers, uses  
 RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)  
 (cobalt- and vanadium-based catalysts for photochem. crosslinking of glass fiber/unsatd. polyester resins)

IT Crosslinking catalysts  
 Polymerization catalysts  
 (photochem., cobalt- and vanadium-based catalysts for photochem. crosslinking of glass fiber/unsatd. polyester resins)

IT Polyesters, processes  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)  
 (unsatd., cobalt- and vanadium-based catalysts for photochem. crosslinking of glass fiber/unsatd. polyester resins)

IT 1686-22-2, Triethyl vanadate 1686-24-4, Tri-(tert-butyl) vanadate  
 5588-84-1 19631-94-8 23602-28-0 36300-65-9  
 RL: CAT (Catalyst use); USES (Uses)  
 (cobalt- and vanadium-based catalysts for photochem. crosslinking of

glass fiber/unsatd. polyester resins)

L16 ANSWER 48 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1996:244847 CAPLUS  
DN 124:318016  
ED Entered STN: 25 Apr 1996  
TI A tungsten organometallic complex as a spectroscopic probe of  
acrylate polymerization in thin films  
AU Rawlins, Kathleen A.; Lees, Alistair J.; Fuerniss, Stephen J.; Papathomas,  
Kostas I.  
CS Department Chemistry, Binghamton University, Binghamton, NY, 13902-6016,  
USA  
SO Polymer Preprints (American Chemical Society, Division of Polymer  
Chemistry) (1996), 37(1), 647-8  
CODEN: ACPPAY; ISSN: 0032-3934  
PB American Chemical Society, Division of Polymer Chemistry  
DT Journal  
LA English  
CC 35-4 (Chemistry of Synthetic High Polymers)  
AB Thin films were prepared by polymerization of PMMA and trimethylolpropane  
triacylate with the phosphorescent  $W(CO)_4(4\text{-methyl-1,10-phenanthroline})$   
complex and photoinitiators. The electronic absorption spectrum of the  
film was studied.  
ST PMMA trimethylolpropane triacylate polymn tungsten complex; acrylate  
copolymer photopolymn tungsten organometallic complex  
IT Polymerization  
(photochem., polymerization of PMMA and trimethylolpropane triacylate with  
phosphorescent  $W(CO)_4(4\text{-methyl-1,10-phenanthroline})$  complex)  
IT 87655-71-8  
RL: NUU (Other use, unclassified); USES (Uses)  
(polymerization of PMMA and trimethylolpropane triacylate with  
phosphorescent  
 $W(CO)_4(4\text{-methyl-1,10-phenanthroline})$  complex)  
IT 52271-32-6P, Methyl methacrylate-trimethylolpropane triacylate copolymer  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polymerization of PMMA and trimethylolpropane triacylate with  
phosphorescent  
 $W(CO)_4(4\text{-methyl-1,10-phenanthroline})$  complex)

L16 ANSWER 49 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1995:963520 CAPLUS  
DN 123:342154  
ED Entered STN: 06 Dec 1995  
TI Substrate coated or impregnated with flexible epoxy composition  
IN Kinzer, Kevin E.; Holland, Lowell W.; Sridhar, Krishnamurthy; Kellen,  
James N.; Pribnow, Richard W.  
PA Minnesota Mining and Manufacturing Co., USA  
SO PCT Int. Appl., 35 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM C08G059-22  
ICS C09D163-00; C08G059-68  
CC 37-6 (Plastics Manufacture and Processing)  
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9521207	A1	19950810	WO 1994-US14346	19941213
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 5667893	A	19970916	US 1994-191601	19940204
	EP 742804	A1	19961120	EP 1995-905920	19941213
	EP 742804	B1	20000426		
	R: DE, FR, GB, IT				
PRAI	US 1994-191601	A	19940204		

US 1992-958930  
WO 1994-US14346

B2 19921009  
W 19941213

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9521207	ICM	C08G059-22
	ICS	C09D163-00; C08G059-68
	IPCI	C08G0059-22 [ICM,6]; C09D0163-00 [ICS,6]; C08G0059-68 [ICS,6]; C08G0059-00 [ICS,6,C*]
	IPCR	B32B0027-38 [I,C*]; B32B0027-38 [I,A]; C08G0059-00 [I,C*]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C08K0005-00 [I,C*]; C08K0005-00 [I,A]; C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]
	ECLA	C08G059/22B; C08G059/24; C08G059/38; C08G059/68; C09D163/00
US 5667893	IPCI	C08G0059-14 [ICM,6]; C08G0059-00 [ICM,6,C*]; B32B0027-38 [ICS,6]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]; C09J0133-00 [I,C*]; C09J0133-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]; H01B0003-40 [I,C*]; H01B0003-40 [I,A]
	NCL	428/413.000; 106/287.180; 106/287.220; 428/345.000; 522/016.000; 522/022.000; 522/066.000; 522/170.000; 525/524.000; 528/103.000
	ECLA	C08G059/14K2C; C08G059/22B; C08G059/24; C08G059/38; C08G059/68; C09D163/00; C09J007/02K9F; C09J007/04K; H01B003/40
EP 742804	IPCI	C08G0059-22 [ICM,6]; C09D0163-00 [ICS,6]; C08G0059-68 [ICS,6]; C08G0059-00 [ICS,6,C*]

AB An article comprises a substrate which has coated thereon a photopolymerizable epoxy composition containing (a) a plurality of epoxides including at least one selected from bisphenol A epoxides and cycloaliph. epoxides, and at least one aliphatic epoxide, (b) 0.1-2% of at least one organometallic cationic initiator capable of initiating polymerization at wavelengths of from 200-600 nm, and optionally (c)  $\geq 1$  accelerating agent. The article can be a flexible tape backing or a chip-resistant paint.

ST epoxy compn coated substrate; tape backing paint epoxy compn

IT Epoxy resins, uses

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(substrate coated or impregnated with)

IT 29797-71-5, ERL 4299 33294-14-3, Epirez 5163 147705-18-8, Heloxy 84 147705-19-9, Heloxy 502

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(flexible epoxy composition containing)

L16 ANSWER 50 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:623308 CAPLUS

DN 123:11232

ED Entered STN: 21 Jun 1995

TI Epoxy-impregnated flexible electrical tape backings for various adhesives

IN Sridhar, Krishnamurthy; Pribnow, Richard W.; Kellen, James N.

PA Minnesota Mining and Manufacturing Co., USA

SO PCT Int. Appl., 24 pp.

CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM H01B003-40  
 ICS C09J007-02; C09J007-04  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9409497	A1	19940428	WO 1993-US8288	19930901
	W: CA, JP, KR				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 680657	A1	19951108	EP 1993-920469	19930901
	R: DE, FR, GB, IT				
	JP 08502527	T	19960319	JP 1993-509986	19930901
	CN 1086626	A	19940511	CN 1993-118640	19931008
PRAI	US 1992-958930	A	19921009		
	WO 1993-US8288	W	19930901		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9409497	ICM	H01B003-40
	ICS	C09J007-02; C09J007-04
	IPCI	H01B0003-40 [ICM,5]; C09J0007-02 [ICS,5]; C09J0007-04 [ICS,5]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]; C09J0133-00 [I,C*]; C09J0133-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]; H01B0003-40 [I,C*]; H01B0003-40 [I,A]
	ECLA	C08G059/14K2C; C08G059/22B; C08G059/38; C08G059/68; C09J007/02K9F; C09J007/04K; H01B003/40
EP 680657	IPCI	H01B0003-40 [ICM,6]; C09J0007-02 [ICS,6]; C09J0007-04 [ICS,6]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]; C09J0133-00 [I,C*]; C09J0133-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]; H01B0003-40 [I,C*]; H01B0003-40 [I,A]
JP 08502527	IPCI	C08J0005-04 [ICM,6]; B32B0005-18 [ICS,6]; B32B0027-00 [ICS,6]; C08G0059-68 [ICS,6]; C08G0059-00 [ICS,6,C*]; C09J0007-02 [ICS,6]; H01B0003-40 [ICS,6]
CN 1086626	IPCI	H01B0003-40 [ICM,5]; H01B0003-08 [ICS,5]; H01B0003-02 [ICS,5,C*]; H01B0003-48 [ICS,5]; H01B0003-18 [ICS,5,C*]; H01B0017-56 [ICS,5]; C09D0163-00 [ICS,5]
	IPCR	C08J0005-04 [I,C*]; C08J0005-04 [I,A]; B32B0005-18 [I,C*]; B32B0005-18 [I,A]; B32B0027-00 [I,C*]; B32B0027-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-14 [I,A]; C08G0059-22 [I,A]; C08G0059-24 [I,A]; C08G0059-38 [I,A]; C08G0059-68 [I,A]; C09D0163-00 [I,C*]; C09D0163-00 [I,A]; C09J0007-02 [I,C*]; C09J0007-02 [I,A]; C09J0007-04 [I,C*]; C09J0007-04 [I,A]; C09J0121-00 [I,C*]; C09J0121-00 [I,A]

C09J0133-00 [I,C\*]; C09J0133-00 [I,A]; C09J0175-04  
[I,C\*]; C09J0175-04 [I,A]; H01B0003-40 [I,C\*];  
H01B0003-40 [I,A]

- AB The backing comprises a substrate which has coated thereon a photopolymerizable epoxy composition containing (A) a plurality of epoxides including  $\geq 1$  aliphatic epoxide and at least one selected from bisphenol A epoxides and cycloaliph. epoxides, (B) 0.1-2%  $\geq 1$  organometallic cationic initiator capable of initiating polymerization at wavelengths 200-600 nm, and (C)  $\geq 1$  accelerating agent, wherein the backing is fully cured after an irradiation of from 1-15 s, without a heating step. Stirring ERL 4299 60.0, Heloxy 84 40, and cyclopentadienyl iron (II) hexafluoroantimonate 1.0 g at 75°, adding 1.5 g cumene hydroperoxide to the cooled mixture, impregnating onto a glass cloth, and irradiating at 180-420 nm for  $< 10$  s gave a backing with insulation resistance  $3 \times 10^4$  ohms, tensile 13.26 kg/cm<sup>2</sup>, and elongation 5.4%. A rubber adhesive was coated on the glass cloth backing to give an adhesive tape for use in elec. insulation.
- ST epoxy impregnated elec tape backing; adhesive tape backing elec insulation
- IT Rubber, natural, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT Polyesters, uses  
Polyimides, uses  
Polythiophenylenes  
RL: NUU (Other use, unclassified); USES (Uses)  
(backing; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT Adhesive tapes  
(elec.-insulative; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT Epoxy resins, uses  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT Polymerization catalysts  
(photochem., cationic; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT Glass fibers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(textiles, backing; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT 68540-69-2, Acrylic acid-isooctyl acrylate-methyl acrylate copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(adhesive; epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT 80-15-9, Cumene hydroperoxide 12083-64-6  
RL: CAT (Catalyst use); USES (Uses)  
(epoxy-impregnated flexible elec. tape backings for various adhesives)
- IT 163963-87-9P 163963-88-0P  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(impregnants; epoxy-impregnated flexible elec. tape backings for various adhesives)

L16 ANSWER 51 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:591449 CAPLUS  
DN 121:191449  
ED Entered STN: 15 Oct 1994  
TI optical recording composition  
IN Maeda, Koichi; Yamamoto, Hiroaki; Takigawa, Akio  
PA Nippon Sheet Glass Co Ltd, Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent

LA Japanese  
 ICM G03C001-735  
 ICS G03C001-675; G03F007-004; G03F007-028; G03H001-02  
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06019040	A	19940128	JP 1992-172534	19920630
	JP 2953200	B2	19990927		
	US 2002004172	A1	20020110	US 2001-903585	20010713
	US 6524771	B2	20030225		
PRAI	JP 1992-172534	A	19920630		
	JP 1992-299040	A	19921110		
	US 1993-86241	B1	19930630		
	US 1994-279627	B3	19940725		
	US 1995-412021	A3	19950328		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 06019040	ICM	G03C001-735
	ICS	G03C001-675; G03F007-004; G03F007-028; G03H001-02
	IPCI	G03C0001-735 [ICM,5]; G03C0001-73 [ICM,5,C*]; G03C0001-675 [ICS,5]; G03F0007-004 [ICS,5]; G03F0007-028 [ICS,5]; G03H0001-02 [ICS,5]
	IPCR	G03C0001-675 [I,C*]; G03C0001-675 [I,A]; G03C0001-73 [I,C*]; G03C0001-735 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-028 [I,C*]; G03F0007-028 [I,A]; G03H0001-02 [I,C*]; G03H0001-02 [I,A]; G11B0007-24 [I,C*]; G11B0007-24 [I,A]; G11B0007-244 [I,A]
US 2002004172	IPCI	G03H0001-04 [ICM,7]; G11B0007-24 [ICS,7]; C03B0008-00 [ICS,7]
	IPCR	C03C0001-00 [I,A]; C03C0001-00 [I,C*]; C03C0017-00 [I,A]; C03C0017-00 [I,C*]; G11B0007-00 [I,C*]; G11B0007-0065 [I,A]; G11B0007-24 [I,C*]; G11B0007-251 [I,A]; G11B0007-26 [I,A]; G11B0007-26 [I,C*]
	NCL	430/001.000; 065/017.200; 369/003.000; 430/002.000; 430/270.110; 430/290.000; 430/330.000
	ECLA	C03C001/00D4; C03C017/00D4B; G11B007/0065; G11B007/251; G11B007/26

AB An optical recording composition especially suited for forming a volume-phase hologram showing high diffraction efficiency, resolution, and transparency and improved durability comprises a photopolymerizable monomer or oligomer, a photopolymn. initiator, an organometallic compound which can be hydrolyzed or condensed, and a catalyst for the hydrolysis of the organometallic compound

ST optical recording compn photopolymerizable holog

IT Siloxanes and Silicones, uses

RL: USES (Uses)

(di-Me, photopolymerizable compns. containing, for hologram formation)

IT Recording materials

(optical, photopolymerizable compns. containing monomers and organometallic compds. for)

IT Holography

(volume-phase, photopolymerizable compns. containing monomers and organometallic compds. for)

IT 78-10-4, Tetraethoxysilane 546-68-9, Tetraisopropyl titanate 15625-89-5 16969-10-1, 2-Hydroxy-3-phenoxypropyl acrylate 28961-43-5 77473-08-6

RL: USES (Uses)

(photopolymerizable compns. containing, for hologram formation)

L16 ANSWER 52 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:566106 CAPLUS  
 DN 121:166106  
 ED Entered STN: 01 Oct. 1994  
 TI Pressure-tuning FT-Raman spectroscopy  
 AU Barnett, Steven M.; Brienne, Stephane H. R.; Markwell, Ross D.; Kawai, Nancy T.; Butler, Ian S.; Gilson, Denis F. R.; Vlcek, Antonin, Jr.  
 CS Dep. Chem., McGill Univ., Montreal, QC, H3A 2K6, Can.  
 SO Proceedings of SPIE-The International Society for Optical Engineering (1993), 2089(9TH INTERNATIONAL CONFERENCE ON FOURIER TRANSFORM SPECTROSCOPY, 1993), 208-9  
 CODEN: PSISDG; ISSN: 0277-786X  
 DT Journal  
 LA English  
 CC 73-3 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 AB Pressure-tuning dispersive Raman spectroscopy, using diamond anvil cells, has many of the common limitations of Raman spectroscopy such as low signal intensity, as well as photodecompn. and fluorescence of many samples. In the present investigations, the pressure-tuning experiment has been successfully coupled to an FT-Raman spectrometer using a microscope for sample alignment and measurement. The use of a holog. notch filter to eliminate the intense scattering due to the diamond anvil cell is discussed and studies involving organometallic complex, polymers, and biomols. are presented.  
 ST pressure tuning Fourier transform Raman spectroscopy  
 IT Raman spectrometry  
 (Fourier-transform, pressure-tuning dispersive, with diamond-anvil cell)

L16 ANSWER 53 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:484003 CAPLUS  
 DN 121:84003  
 ED Entered STN: 20 Aug 1994  
 TI Light-sensitive organometallic compounds in photopolymerization  
 AU Roloff, Achim  
 CS Res. Cent. Marly, Ciba-Geigy AG, Fribourg, CH 1701, Switz.  
 SO Advances in Chemistry Series (1993), 238(Photosensitive Metal-Organic Systems), 399-409  
 CODEN: ADCSAJ; ISSN: 0065-2393  
 DT Journal; General Review  
 LA English  
 CC 35-0 (Chemistry of Synthetic High Polymers)  
 AB A review with 28 refs. on organometallic compound photopolymn. initiators.  
 ST review organometallic compd photopolymn initiator  
 IT Organometallic compounds  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for photopolymn.)  
 IT Polymerization catalysts  
 (photochem., organometallic compds. as)

L16 ANSWER 54 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1993:81468 CAPLUS  
 DN 118:81468  
 ED Entered STN: 02 Mar 1993  
 TI Inorganic and organometallic photoinitiators  
 AU Yang, D. Billy; Kutal, Charles  
 CS Chem. Mater. Sci. Group, Loctite Corp., Newington, CT, 06111, USA  
 SO Radiat. Curing (1992), 21-55. Editor(s): Pappas, Socrates Peter.  
 Publisher: Plenum, New York, N. Y.  
 CODEN: 58IPA2  
 DT Conference; General Review



LA English  
 CC 35-0 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37  
 AB A review with 150 refs. on catalysts for photoinitiated polymerization and crosslinking.  
 ST review catalyst photopolymer photocrosslinking; inorg  
 organometallic photoinitiator review  
 IT Inorganic compounds  
 Organometallic compounds  
 RL: USES (Uses)  
 (photoinitiators, for polymerization and crosslinking)  
 IT Crosslinking catalysts  
 Polymerization catalysts  
 (photochem., inorg. and organometallic compds. as)

L16 ANSWER 55 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1992:471498 CAPLUS  
 DN 117:71498  
 ED Entered STN: 23 Aug 1992  
 TI Preparation of energy-curable pressure-sensitive adhesive compositions  
 IN Williams, Jerry W.; Devoe, Robert J.; Klun, Thomas P.; Vesley, George F.;  
 Zimmerman, Patrick G.  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO Eur. Pat. Appl., 27 pp.  
 CODEN: EPXXDW

DT Patent  
 LA English  
 IC ICM C09J175-04  
 ICS C09J007-02; C08G018-63; C08F283-00  
 CC 39-15 (Synthetic Elastomers and Natural Rubber)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 476822	A2	19920325	EP 1991-307214	19910806
	EP 476822	A3	19920429		
	EP 476822	B1	19970305		
	R: CH, DE, FR, GB, IT, LI				
	CA 2048232	A1	19920306	CA 1991-2048232	19910731
	JP 04255781	A	19920910	JP 1991-220388	19910830
	US 5462797	A	19951031	US 1994-193518	19940208
PRAI	US 1990-578022	A	19900905		
	US 1992-872134	B1	19920422		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 476822	ICM	C09J175-04
	ICS	C09J007-02; C08G018-63; C08F283-00
	IPCI	C09J0175-04 [ICM,5]; C09J0007-02 [ICS,5]; C08G0018-63 [ICS,5]; C08G0018-00 [ICS,5,C*]; C08F0283-00 [ICS,5]
	IPCR	C08F0283-00 [I,C*]; C08F0283-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-22 [I,A]; C08G0018-63 [I,A]; C09J0004-02 [I,C*]; C09J0004-02 [I,A]; C09J0175-00 [I,C*]; C09J0175-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]
CA 2048232	ECLA	C08F283/00B; C08G018/22; C08G018/63T; C09J175/04
	IPCI	C09J0175-04 [ICM,5]; C08J0007-18 [ICS,5]; C08J0007-00 [ICS,5,C*]
	IPCR	C08F0283-00 [I,C*]; C08F0283-00 [I,A]; C08G0018-00 [I,C*]; C08G0018-22 [I,A]; C08G0018-63 [I,A]; C09J0004-02 [I,C*]; C09J0004-02 [I,A]; C09J0175-00 [I,C*]; C09J0175-00 [I,A]; C09J0175-04 [I,C*]; C09J0175-04 [I,A]
JP 04255781	IPCI	C09J0175-04 [ICM,5]; C08G0018-22 [ICS,5]; C08G0018-00 [ICS,5,C*]; C09J0175-04 [ICS,5]
	IPCR	C08F0283-00 [I,C*]; C08F0283-00 [I,A]; C08G0018-00

[I,C\*]; C08G0018-22 [I,A]; C08G0018-63 [I,A];  
C09J0004-02 [I,C\*]; C09J0004-02 [I,A]; C09J0175-00  
[I,C\*]; C09J0175-00 [I,A]; C09J0175-04 [I,C\*];  
C09J0175-04 [I,A]

US 5462797 IPCI C09J0004-02 [ICM,6]; C09J0133-08 [ICS,6]; C09J0133-06  
[ICS,6,C\*]; C09J0175-04 [ICS,6]; B32B0007-12 [ICS,6]  
IPCR C08F0283-00 [I,A]; C08F0283-00 [I,C\*]; C08G0018-00  
[I,C\*]; C08G0018-22 [I,A]; C08G0018-63 [I,A];  
C09J0175-04 [I,A]; C09J0175-04 [I,C\*]  
NCL 428/345.000; 428/355.000R; 522/004.000; 522/018.000;  
522/024.000; 522/028.000; 522/029.000; 522/096.000;  
522/174.000; 522/182.000

AB The title compns. are manufactured by the combination of  $\geq 1$  free radical  
photopolymerizable monomer,  $\geq 1$  set of polyurethane  
precursors, and a photoinitiation system consisting of 1 salt of a  
cationic organometallic complex and  $\geq 1$  addnl.  
free-radical catalyst. A mixture of isooctyl acrylate and  
N-vinylpyrrolidinone, and Irgacure 651 free radical photocatalyst was  
stirred, degassed by bubbling N, irradiated to form a prepolymer, mixed  
with hydroxyethylated bisphenol A, heated at 80-90°, mixed with an  
inorg. cationic photocatalyst and 1,6-hexanediol diacrylate, further mixed  
with a 1:1 weight mixture of Desmodur N 100 and IPDI and ( $\eta$ 6-  
mesitylene)( $\eta$ 5-cyclopentadienyl)iron(+1) hexafluorophosphate  
photoinitiator, degassed under vacuum, IR-heated, coated on a  
release-lined polyester film, and UV-irradiated to a temperature of 120°  
to give a pressure-sensitive adhesive film showing tensile strength 3.72  
MPa, elongation 900%, and peel strength 51.2 N/dm.

ST adhesive pressure sensitive acrylic polymer; vinyl polymer pressure  
sensitive adhesive; polyacrylate pressure sensitive adhesive;  
vinylpyrrolidone polymer pressure sensitive adhesive; polyurethane rubber  
adhesive; organometallic complex cation photocatalysts adhesive;  
bisphenol ethoxylated polymer adhesive; photochem polymn adhesive  
precursor; UV curable pressure sensitive adhesive

IT Rubber, urethane, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(acrylic, preparation of, as adhesives, pressure-sensitive)

IT Ketones, uses  
RL: CAT (Catalyst use); USES (Uses)  
(aryl, catalysts, for pressure-sensitive adhesive manufacture)

IT Polymerization catalysts  
(photochem., cationic organometallic complexes and metal  
salts and nitrogen and oxygen-containing compds., for pressure-sensitive  
adhesive manufacture)

IT Adhesives  
(pressure-sensitive, acrylic-urethane and vinyl-urethane rubbers as,  
preparation of high tensile strength, method for)

IT 77-58-7, Dibutyltin dilaurate 58109-40-3, Diphenyliodonium  
hexafluorophosphate  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for pressure-sensitive adhesive manufacture)

IT 24650-42-8, Irgacure 651 32757-45-2 32760-80-8 34978-37-5  
38959-35-2 92140-24-4  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, photochem., for pressure-sensitive adhesive manufacture)

IT 79-10-7D, 2-Propenoic acid, polymers with acrylic monomer and ethoxylated  
bisphenol and polyisocyanate 88-12-0D, polymers with acrylic monomer and  
polyisocyanate and diol 29590-42-9D, Isooctyl acrylate, polymers with  
vinylpyrrolidone and acrylates and polyisocyanates and diol 32492-61-8D,  
polymers with acrylic monomer and polyisocyanate 142712-93-4  
142712-94-5 142712-95-6 142712-96-7 142712-98-9 142713-00-6  
142713-01-7 142735-15-7 142735-17-9  
RL: USES (Uses)  
(rubber, adhesives, pressure-sensitive, preparation of high tensile  
strength)

L16 ANSWER 56 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1992:71942 CAPLUS  
 DN 116:71942  
 ED Entered STN: 21 Feb 1992  
 TI Photopolymerization with transition metal complexes  
 AU Meier, K.  
 CS Bus. Unit Electron. Mater., Ciba-Geigy A.-G., Basel, CH-4002, Switz.  
 SO Coordination Chemistry Reviews (1991), 111, 97-110  
 CODEN: CCHRAM; ISSN: 0010-8545  
 DT Journal; General Review  
 LA English  
 CC 74-0 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 35  
 AB An introduction to photopolymer chemical is given with special  
 emphasis on photopolymn. using organometallic  
 initiators. Photopolymers are used in various processes for the  
 manufacturing of printed circuit boards (PCBs) and for integrated circuits in  
 microelectronic applications. 40 Refs.  
 ST review photopolymn transition metal complex initiator  
 IT Transition metals, compounds  
 RL: USES (Uses)  
 (complexes, as initiators for photopolymn.)  
 IT Electronics  
 (micro-, photopolymn. with transition metal complex  
 initiators in relation to)  
 IT Polymerization catalysts  
 (photochem., with transition metal complex)  
 IT Electric circuits  
 (printed, manufacture of, photopolymn. with transition metal  
 complex initiators in relation to)

L16 ANSWER 57 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:532513 CAPLUS  
 DN 113:132513  
 ED Entered STN: 13 Oct 1990  
 TI Polynuclear organometallic complex  
 IN Suzuno, Jun; Fukuda, Akimine; Koyama, Toshiki; Hanabusa, Kenji; Shirai,  
 Hiroyoshi; Hojo, Nobumasa  
 PA TDK Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM C07F017-02  
 ICS C07F017-00; C09K003-00  
 CC 29-12 (Organometallic and Organometalloidal Compounds)  
 Section cross-reference(s): 35, 72

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02032088	A	19900201	JP 1988-182395	19880720
	JP 2743180	B2	19980422		
PRAI	JP 1988-182395		19880720		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02032088	ICM	C07F017-02
	ICS	C07F017-00; C09K003-00
	IPCI	C07F0017-02 [ICM,5]; C07F0017-00 [ICS,5]; C09K0003-00 [ICS,5]
	IPCR	C09K0003-00 [I,C*]; C09K0003-00 [I,A]; C07F0017-00 [I,C*]; C07F0017-00 [I,A]; C07F0017-02 [I,A]
AB		A polynuclear complex comprise a diacetylene segment having metallocenes on both ends. The complex is electrochem. active and useful as a

ST photopolymerizable Langmuir-Blodgett film.  
 IT metallocene acetylenic polynuclear complex  
 IT Films  
 (Langmuir-Blodgett, diacetylenic metallocene polynuclear complexes for)  
 IT Redox reaction  
 (electrochem., of diacetylenic metallocene polynuclear complex  
 Langmuir-Blodgett films)  
 IT Polymerization  
 (photochem., of diacetylenic metallocene polynuclear complex  
 Langmuir-Blodgett films)  
 IT 105730-26-5P 128628-78-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 1271-42-7 1293-79-4 36060-65-8, Hexa-2,4-diene-1,6-diol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, in preparation of diacetylenic metallocenes)

L16 ANSWER 58 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:449959 CAPLUS  
 DN 113:49959  
 ED Entered STN: 03 Aug 1990  
 TI Optical recording medium comprising polymethine dye and  
 organometallic compound  
 IN Ichinose, Keiko; Sato, Tsutomu  
 PA Ricoh Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC ICM B41M005-26  
 ICS C09K009-02; G11B007-24  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

FAN.CNT 1

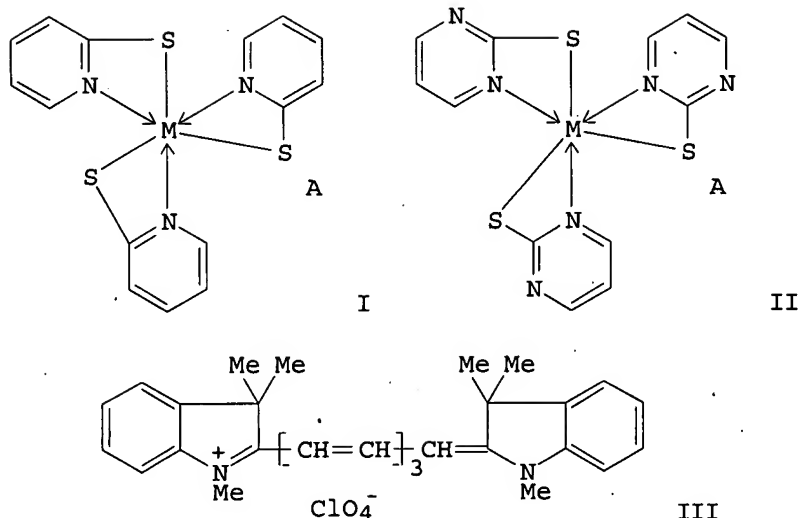
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01186387	A	19890725	JP 1988-12198	19880121
PRAI JP 1988-12198		19880121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01186387	ICM	B41M005-26
	ICS	C09K009-02; G11B007-24
	IPCI	B41M0005-26 [ICM,4]; C09K0009-02 [ICS,4]; G11B0007-24 [ICS,4]
	IPCR	B41M0005-26 [I,C*]; B41M0005-26 [I,A]; C09K0009-02 [I,C*]; C09K0009-02 [I,A]; G11B0007-24 [I,C*]; G11B0007-241 [I,A]; G11B0007-244 [I,A]; G11B0007-254 [I,A]; G11B0007-257 [I,A]

OS MARPAT 113:49959

GI



AB An optical recording medium is composed of a substrate bearing directly or via an underlying layer a recording layer containing a polymethine dye as a main component and a surface protecting layer wherein  $\geq 1$  of the above layers contains  $\geq 1$  kind of metal complexes selected from the general formulas I and II (M = metal; A = cation; and the pyridine or pyrimidine ring may have substituents). The medium has high fastness toward heat and light, and improved stability toward repeated rerecordings. Thus, a 1.2 mm thick poly(Me methacrylate) substrate bearing a surface coating of an acrylate photopolymer was spin-coated with a mixture of a cyanine dye III and a complex I (M = Ni; A = PBu<sub>4</sub>) at a weight ratio of 5:1 in 1,2-dichloroethane solution to form a 600 Å thick recording layer. Recording and reading out of information were carried out by irradiation with a semiconductor laser of 790 nm onto the recording layer through the substrate side at a pulse frequency of 0.7 MHz and a linear scanning rate of 2.1 m/s to achieve a carrier-to-noise ratio of 55 dB, which was substantially maintained after a forced preservation of the medium for 15 h under exposure to a 1000 kW W lamp.

ST optical recording layer; heat mode; metal sulfide pyridine pyrimidine complex

IT Recording materials

(optical, containing polymethine dyes and metal pyridinethiol or pyrimidinethiol complex, with good lightfastness)

IT	16595-48-5	96236-20-3	123833-34-1	126683-05-4
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RL: USES (Uses)

(optical recording material containing metal complex and, for good lightfastness)

IT	126752-08-7 128265-19-0	126752-18-9	126752-21-4	126788-26-9	126788-27-0
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RL: USES (Uses)

(optical recording material containing polymethine dye and, for good lightfastness)

L16 ANSWER 59 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1990:243096 CAPLUS

DN 112:243096

ED Entered STN: 23 Jun 1990

## TI Photopolymerizable composition

IN Imahashi, Satoshi; Saito, Atsushi; Yamashita, Katuhiro

PA Toyo Boseki K. K., Japan

SO Ger. Offen., 18 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM G03F007-10  
ICS C08F002-50; C08F004-00  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3918105	A1	19891214	DE 1989-3918105	19890602
	JP 01304453	A	19891208	JP 1988-136272	19880602
	JP 2757375	B2	19980525		
	JP 02113250	A	19900425	JP 1988-266654	19881022
	JP 02157761	A	19900618	JP 1988-312748	19881210
	US 4987056	A	19910122	US 1989-360831	19890602
PRAI	JP 1988-136272	A	19880602		
	JP 1988-266654	A	19881022		
	JP 1988-312748	A	19881210		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 3918105	ICM	G03F007-10
	ICS	C08F002-50; C08F004-00
	IPCI	G03F0007-10 [ICM,4]; C08F0002-50 [ICS,4]; C08F0002-46 [ICS,4,C*]; C08F0004-00 [ICS,4]
	IPCR	C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]
JP 01304453	IPCI	G03C0001-68 [ICM,4]; G03C0001-68 [ICS,4]
	IPCR	G03F0007-029 [I,C*]; G03F0007-029 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]
JP 02113250	ECLA	G03F007/027
	IPCI	G03F0007-031 [ICM,5]; C08F0002-50 [ICS,5]; C08F0002-46 [ICS,5,C*]; G03F0007-029 [ICS,5]
	IPCR	G03F0007-029 [I,C*]; G03F0007-029 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]
JP 02157761	IPCI	G03F0007-031 [ICM,5]; C08F0002-50 [ICS,5]; C08F0002-46 [ICS,5,C*]
	IPCR	G03F0007-031 [I,C*]; G03F0007-031 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]
US 4987056	IPCI	G03F0007-029 [ICM,5]; C08F0004-10 [ICS,5]; C08F0004-16 [ICS,5]; C08F0004-26 [ICS,5]; C08F0004-00 [ICS,5,C*]
	IPCR	C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; G03F0007-027 [I,C*]; G03F0007-027 [I,A]
	NCL	430/281.000; 430/914.000; 430/915.000; 430/916.000; 522/014.000; 522/026.000; 522/028.000

OS MARPAT 112:243096

AB The title composition contains: (1)  $\geq 1$  ethylenically unsatd. compound which is not a gas at room temperature; (2)  $\geq 1$  organometallic arene compound; (3)  $\geq 1$  compound selected from an unsatd. o-aminophenyl ketone, a pyridine derivative or its salts, or a xanthene or thioxanthene compound and their mixts.; and optionally (4)  $\geq 1$  compound selected from a phenylglycine derivative, a cyclic diketone compound, or their mixts. The composition has high photosensitivity. The material can be used in industrial printing, photoresists, and the like.

ST photopolymerizable compn photoresist printing plate;  
organometallic arene compd photopolymerizable compn;  
aminophenyl ketone photopolymerizable compn; pyridine deriv  
photopolymerizable compn; xanthene thioxanthene  
photopolymerizable compn; phenylglycine photopolymerizable  
compn; cyclic diketone photopolymerizable compn; ketone cyclic  
photopolymerizable compn

IT Photoimaging compositions and processes

(photopolymer, with high photosensitivity)  
 IT Printing plates  
 (photopolymerizable composition for fabrication of)  
 IT Resists  
 (photo-, photopolymerizable composition for)  
 IT 103-01-5, N-Phenylglycine 126-81-8 606-23-5, 1,3-Indandione 765-69-5  
 876-83-5, 2-Methyl-1,3-indandione 1193-55-1 1846-75-9 7358-61-4,  
 1,3,5-Trimethylbarbituric acid 12176-31-7 12282-28-9 14121-47-2  
 17831-71-9, Tetraethyleneglycol diacrylate 21911-69-3 27425-55-4  
 32760-76-2 32760-80-8 32912-48-4 33086-63-4 33480-27-2  
 36245-88-2 38215-36-0 38394-53-5 42288-26-6 51325-75-8  
 52308-73-3 58068-69-2 59688-18-5 72700-02-8, 2-(4'-  
 Diethylaminobenzylidene)-1-tetralone 80601-02-1 90246-07-4  
 102355-72-6 102355-84-0 112667-00-2 119233-99-7,  
 2-(4'-Diethylaminobenzylidene)-1-indanone 127338-83-4 127366-36-3  
 127371-18-0 127371-19-1 127371-20-4 127371-21-5,  
 2,5-Bis(4'-dibutylaminobenzylidene)cyclopentanone 127371-22-6  
 127371-23-7 127371-24-8 127371-25-9 127371-26-0 127371-27-1  
 127371-28-2 127371-29-3 127371-30-6 127371-31-7  
 RL: USES (Uses)  
 (photopolymerizable photoimaging composition containing)

L16 ANSWER 60 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1990:199337 CAPLUS  
 DN 112:199337  
 ED Entered STN: 26 May 1990  
 TI Two-component catalysts for radiochemical polymerization  
 IN Palazzotto, Michael C.; DeVoe, Robert J.  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO Eur. Pat. Appl., 25 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM C08F002-50  
 ICS C09D003-74  
 CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 67

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 344910	A2	19891206	EP 1989-304315	19890428
	EP 344910	A3	19910116		
	EP 344910	B1	19971126		
	R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
	US 4985340	A	19910115	US 1988-201572	19880601
	AU 8933108	A	19891207	AU 1989-33108	19890417
	AU 616002	B2	19911017		
	CA 1338194	C	19960326	CA 1989-597243	19890420
	IN 174073	A1	19940910	IN 1989-MA326	19890428
	IN 174284	A1	19941029	IN 1989-MA325	19890428
	ES 2109221	T3	19980116	ES 1989-304315	19890428
	JP 02020508	A	19900124	JP 1989-128622	19890522
	ZA 8904117	A	19910130	ZA 1989-4117	19890530
	KR 141493	B1	19980615	KR 1989-7613	19890601
PRAI	US 1988-201572	A	19880601		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 344910	ICM	C08F002-50
	ICS	C09D003-74
	IPCI	C08F0002-50 [ICM,4]; C08F0002-46 [ICM,4,C*]; C09D0003-74 [ICS,4]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46 [I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A]; C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-10

		[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];
		C08G0018-00 [I,C*]; C08G0018-04 [I,A]; C08G0018-63
		[I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A];
		C08G0059-40 [I,A]; C08L0075-00 [I,C*]; C08L0075-00
		[I,A]; C09D0004-00 [I,C*]; C09D0004-00 [I,A]
US 4985340	ECLA	C08F002/50; C08G018/63T; C09D004/00+C08F220/00
	IPCI	C08G0018-04 [ICM,5]; C08G0018-22 [ICS,5]; C08G0018-32
		[ICS,5]; C08G0018-00 [ICS,5,C*]; G03F0007-029 [ICS,5]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46
		[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];
		C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-10
		[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];
		C08G0018-00 [I,C*]; C08G0018-04 [I,A]; C08G0018-63
		[I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A];
		C08G0059-40 [I,A]; C08L0075-00 [I,C*]; C08L0075-00
		[I,A]; C09D0004-00 [I,C*]; C09D0004-00 [I,A]
	NCL	430/270.100; 430/280.100; 430/281.100; 430/283.100;
		430/288.100; 430/906.000; 430/914.000; 430/916.000;
		522/015.000; 522/025.000; 522/066.000; 522/170.000;
		522/174.000; 528/051.000; 528/052.000; 528/056.000;
		528/075.000; 528/085.000
AU 8933108	IPCI	C08G0018-22 [ICM,4]; C08G0018-00 [ICM,4,C*];
		C08G0059-68 [ICS,4]; C08G0059-00 [ICS,4,C*];
		C08G0065-12 [ICS,4]; C08G0065-00 [ICS,4,C*];
		C08G0077-38 [ICS,4]; C08G0077-00 [ICS,4,C*]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46
		[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];
		C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-10
		[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];
		C08G0018-00 [I,C*]; C08G0018-04 [I,A]; C08G0018-63
		[I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A];
		C08G0059-40 [I,A]; C08L0075-00 [I,C*]; C08L0075-00
		[I,A]; C09D0004-00 [I,C*]; C09D0004-00 [I,A]
CA 1338194	IPCI	G03F0007-038 [ICM,6]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46
		[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];
		C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-10
		[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];
		C08G0018-00 [I,C*]; C08G0018-04 [I,A]; C08G0018-63
		[I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A];
		C08G0059-40 [I,A]; C08L0075-00 [I,C*]; C08L0075-00
		[I,A]; C09D0004-00 [I,C*]; C09D0004-00 [I,A]
IN 174073	IPCI	C08L0063-00 [ICM,5]; C08L0075-00 [ICS,5]
	IPCR	C08L0063-00 [I,C*]; C08L0063-00 [I,A]; C08L0075-00
		[I,C*]; C08L0075-00 [I,A]
IN 174284	IPCI	C08L0025-00 [ICM,5]; C08L0075-00 [ICS,5]
	IPCR	C08L0025-00 [I,C*]; C08L0025-00 [I,A]; C08L0075-00
		[I,C*]; C08L0075-00 [I,A]
ES 2109221	IPCI	C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C*];
		C09D0123-00 [ICS,6]; C08G0059-68 [ICS,6]; C08G0059-00
		[ICS,6,C*]; G03F0007-029 [ICS,6]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46
		[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];
		C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-10
		[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];
		C08G0018-00 [I,C*]; C08G0018-04 [I,A]; C08G0018-63
		[I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A];
		C08G0059-40 [I,A]; C08L0075-00 [I,C*]; C08L0075-00
		[I,A]; C09D0004-00 [I,C*]; C09D0004-00 [I,A]
JP 02020508	IPCI	C08F0020-10 [ICM,5]; C08F0002-46 [ICS,5]; C08F0020-56
		[ICS,5]; C08F0020-00 [ICS,5,C*]; C08G0018-04 [ICS,5];
		C08G0018-00 [ICS,5,C*]; C08G0059-40 [ICS,5];
		C08G0059-00 [ICS,5,C*]; C08L0075-04 [ICS,5];
		C08L0075-00 [ICS,5,C*]
	IPCR	C08L0075-04 [I,A]; C08F0002-46 [I,C*]; C08F0002-46



[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];  
C08F0020-00 [I,C\*]; C08F0020-00 [I,A]; C08F0020-10  
[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];  
C08G0018-00 [I,C\*]; C08G0018-04 [I,A]; C08G0018-63  
[I,A]; C08G0059-00 [I,C\*]; C08G0059-00 [I,A];  
C08G0059-40 [I,A]; C08L0075-00 [I,C\*]; C08L0075-00  
[I,A]; C09D0004-00 [I,C\*]; C09D0004-00 [I,A]

ZA 8904117 IPCI C08L [ICM,5]  
IPCR C08L0075-04 [I,A]; C08F0002-46 [I,C\*]; C08F0002-46  
[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];  
C08F0020-00 [I,C\*]; C08F0020-00 [I,A]; C08F0020-10  
[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];  
C08G0018-00 [I,C\*]; C08G0018-04 [I,A]; C08G0018-63  
[I,A]; C08G0059-00 [I,C\*]; C08G0059-00 [I,A];  
C08G0059-40 [I,A]; C08L0075-00 [I,C\*]; C08L0075-00  
[I,A]; C09D0004-00 [I,C\*]; C09D0004-00 [I,A]

KR 141493 IPCI C09D0175-04 [ICM,6]; C09D0163-00 [ICS,6]; C08F0002-50  
[ICS,6]; C08F0002-46 [ICS,6,C\*]; C08G0018-04 [ICS,6];  
C08G0018-00 [ICS,6,C\*]  
IPCR C08L0075-04 [I,A]; C08F0002-46 [I,C\*]; C08F0002-46  
[I,A]; C08F0002-48 [I,A]; C08F0002-50 [I,A];  
C08F0020-00 [I,C\*]; C08F0020-00 [I,A]; C08F0020-10  
[I,A]; C08F0020-52 [I,A]; C08F0020-56 [I,A];  
C08G0018-00 [I,C\*]; C08G0018-04 [I,A]; C08G0018-63  
[I,A]; C08G0059-00 [I,C\*]; C08G0059-00 [I,A];  
C08G0059-40 [I,A]; C08L0075-00 [I,C\*]; C08L0075-00  
[I,A]; C09D0004-00 [I,C\*]; C09D0004-00 [I,A]

AB Radiocurable compns. useful as coatings, binders, and adhesives contain  
unsatd. monomers, epoxides or polyurethane precursors, and curing  
catalysts (organometallic and onium salts). Thus, 1 g  
pentaerythritol tetraacrylate was mixed with 1 g solution of  
( $\eta$ 6-mesitylene)( $\eta$ 5-cyclopentadienyl)iron hexafluoroantimonate (I)  
0.1, Ph<sub>2</sub>I<sup>+</sup> PF<sub>6</sub><sup>-</sup> 0.1,  $\gamma$ -butyrolactone 0.2, and 1,6-hexanediol  
diacrylate 10 g and cured by UV in <10 s; vs. >300 without I.

ST catalyst polymn photochem; acrylate polymn photochem catalyst; iodonium  
salt catalyst photopolymn; iron complex catalyst  
photopolymn; pentaerythritol acrylate photopolymn  
catalyst

IT Organometallic compounds  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for photochem. polymerization)

IT Onium compounds  
RL: CAT (Catalyst use); USES (Uses)  
(iodonium, catalyst, for photochem. polymerization)

IT Polymerization catalysts  
(photochem., onium salts and organometallic complexes, for  
acrylates, epoxides and polyurethane precursors)

IT 12100-39-9 32757-45-2 43105-68-6 52754-92-4 57835-99-1  
57840-38-7 57900-42-2 58109-40-3 59183-95-8 62613-15-4  
77800-13-6 77806-15-6 89031-66-3 92140-24-4 92140-40-4  
92140-41-5 92140-42-6 92140-43-7 94943-93-8 126859-90-3  
RL: CAT (Catalyst use); USES (Uses)  
(catalyst, for photochem. polymerization)

IT 9059-74-9P 38891-86-0P 88581-95-7P 100654-04-4P 122159-46-0P  
123448-16-8P 126758-05-2P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, by photochem. polymerization, catalysts for)

L16 ANSWER 61 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1990:99517 CAPLUS  
DN 112:99517  
ED Entered STN: 18 Mar 1990  
TI Manufacture of methacrylate ester polymers with narrow molecular weight  
distribution  
IN Inoue, Shohei; Aida, Takuzo; Kuroki, Masakatsu; Hosokawa, Yasutoku

PA Kao Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F020-12  
 ICS C08F004-52  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01259008	A	19891016	JP 1988-87559	19880408
PRAI	JP 1988-87559		19880408		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 01259008	ICM	C08F020-12
	ICS	C08F004-52
	IPCI	C08F0020-12 [ICM,4]; C08F0020-00 [ICM,4,C*]; C08F0004-52 [ICS,4]; C08F0004-00 [ICS,4,C*]
	IPCR	C08F0004-00 [I,C*]; C08F0004-52 [I,A]; C08F0004-42 [I,A]; C08F0020-00 [I,C*]; C08F0020-00 [I,A]; C08F0020-12 [I,A]

AB The title polymers are prepared in the presence of organometallic compds. and Al porphyrin complexes as initiators. A solution of  $\alpha,\beta,\gamma,\delta$ -tetraphenylporphine in  $\text{CH}_2\text{Cl}_2$  was stirred 1 h with  $\text{Me}_3\text{Al}$  to give Me (tetraphenylporphinato)aluminum which was used (1 mol) with 3 mol  $\text{Me}_3\text{Al}$  in the polymerization of 100 mol tert-Bu methacrylate in visible light for 0.08 h, giving 100% polymer with weight-average mol. weight 15,600

and number-average mol. weight 14,900 in 100% yield, vs. 3000, 2500, and 44, resp., after 168 h without  $\text{Me}_3\text{Al}$ .

ST methacrylate photopolymn catalyst polydispersity; polymn photochem methacrylate polydispersity; porphyrin aluminum photopolymn methacrylate; aluminum catalyst photopolymn methacrylate

IT Porphyrins

RL: CAT (Catalyst use); USES (Uses)  
 (aluminum complexes, catalysts, for methacrylate photopolymn  
 .., for low polydispersity)

IT Polymerization catalysts

(photochem., aluminum porphyrin-organometal, for methacrylates, for low polydispersity)

IT 75-24-1, Trimethylaluminum 96-10-6, Diethylaluminum chloride, uses and miscellaneous 97-93-8, Triethylaluminum, uses and miscellaneous 557-20-0, Diethylzinc

RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for methacrylate photopolymn., for low polydispersity)

IT 108971-21-7P

RL: PREP (Preparation)  
 (preparation and catalyst activity in methacrylate photopolymn., for low polydispersity)

IT 9011-14-7P, Poly(methyl methacrylate) 25085-83-0P, Poly(benzyl methacrylate) 25189-00-8P, Poly(tert-butyl methacrylate) 26655-94-7P, Poly(isopropyl methacrylate)

RL: PREP (Preparation)  
 (preparation of, with low polydispersity, photopolymn. catalysts for)

IT 917-23-7,  $\alpha,\beta,\gamma,\delta$ -Tetraphenylporphine

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with trimethylaluminum)

AN 1989:544150 CAPLUS  
 DN 111:144150  
 ED Entered STN: 14 Oct 1989  
 TI Process for forming images  
 IN Banks, Christopher Paul; Irving, Edward  
 PA Ciba-Geigy A.-G., Switz.  
 SO Eur. Pat. Appl., 10 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03C001-68  
 ICS G03F007-10; G03F007-20  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 298030	A2	19890104	EP 1988-810426	19880622
	EP 298030	A3	19890712		
	EP 298030	B1	19921028		
	R: DE, FR, GB, IT, NL, SE				
	US 4978604	A	19901218	US 1988-208524	19880620
	CA 1338955	C	19970304	CA 1988-570730	19880629
	JP 01035438	A	19890206	JP 1988-164803	19880701
	JP 2627430	B2	19970709		
PRAI	GB 1987-15435	A	19870701		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 298030	ICM	G03C001-68
	ICS	G03F007-10; G03F007-20
	IPCI	G03C0001-68 [ICM,4]; G03F0007-10 [ICS,4]; G03F0007-20 [ICS,4]
	IPCR	G03C0001-74 [I,C*]; G03C0001-74 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]
US 4978604	IPCI	G03C0005-16 [ICM,5]
	IPCR	G03C0001-74 [I,C*]; G03C0001-74 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]
	NCL	430/327.000; 430/281.100; 430/286.100; 430/328.000; 430/494.000
CA 1338955	IPCI	G03F0007-028 [ICM,6]
	IPCR	G03C0001-74 [I,C*]; G03C0001-74 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]
JP 01035438	IPCI	G03C0001-74 [ICM,4]; G03C0001-68 [ICS,4]; G03C0005-08 [ICS,4]; G03F0007-20 [ICS,4]
	IPCR	G03C0001-74 [I,C*]; G03C0001-74 [I,A]; G03F0007-031 [I,C*]; G03F0007-031 [I,A]; G03F0007-20 [I,C*]; G03F0007-20 [I,A]

AB A process for forming images from liquid coatings on substrates by exposures to actinic radiation at different wavelengths comprises (a) applying, to a substrate, a liquid composition comprising a polymerizable monomer having  $\geq 1$  polymerizable acrylic group per mol., a 1st radiation-activated polymerization initiator for the monomer, and a 2nd radiation-activated polymerization initiator for the monomer, the 1st initiator being activatable by radiation of longer wavelength than that for the 2nd initiator and the liquid composition being substantially free from polymerizable epoxide or vinyl ether groups when the 1st or 2nd initiator is an aromatic onium salt, (b) subjecting the liquid composition to radiation having a wavelength at which one of the initiators is activatable but the other is not, thereby polymerizing the liquid composition such that the liquid composition is solidified but remains curable,

(c) subjecting the solidified composition in a predetd. pattern to radiation having a wavelength at which the initiator not activated in stage (b) is activated, such that in exposed areas the solidified composition is substantially cured, and (d) removing areas of the solidified composition that have not been cured. The monomer is a polyacrylate or polymethacrylate of poly(vinyl alc.) or of an epoxide resin. The 1st initiator is a metallocene, a quinone, a mixture of a dye sensitizer with an aromatic iodonium salt, a 3-ketocoumarin, an acrylphosphine oxide, a mixture of a group IVA element organometallic compound with a photoreducible dye, or a mixture of  $\geq 2$  thereof. The process is useful in the preparation of printing plates and printed circuits.

ST photopolymerizable compn printing plate prepn; printed circuit prepn photopolymerizable compn; polyvinyl alc acrylate photoimaging compn

IT Photoimaging compositions and processes

(photopolymerizable compns. containing acrylic polymers and two photoinitiators of different spectral sensitivities as)

IT Lithographic plates

Printing plates

(photopolymerizable compns. containing acrylic polymers and two photoinitiators of different spectral sensitivities for preparation of)

IT Electric circuits

(printed, photopolymerizable compns. containing acrylic polymers and two photoinitiators of different spectral sensitivities for preparation of)

IT 100-10-7, 4-(N,N-Dimethylamino)benzaldehyde 947-19-3 5495-84-1,  
2-Isopropylthioxanthone 10373-78-1 24650-42-8, Benzildimethyl ketal  
58109-40-3, Diphenyliodonium hexafluorophosphate 64267-12-5,  
3-Benzoyl-7-methoxy coumarin 70393-73-6 71868-10-5 87361-23-7  
93709-30-9 120764-54-7

RL: USES (Uses)

(photopolymerizable compns. containing acrylic polymers and photoinitiator and, for image formation and preparation of printed plates)

IT 79-10-7, 2-Propenoic acid, uses and miscellaneous 80-62-6 103-11-7  
868-77-9 2867-47-2

RL: USES (Uses)

(photopolymerizable compns. containing acrylic polymers and two photoinitiators of different spectral sensitivities and, for image formation and preparation of printing plates)

IT 2082-81-7 4491-03-6 4687-94-9 15625-89-5 24448-20-2 40220-08-4,  
Tris(2-acryloyloxyethyl)isocyanurate

RL: USES (Uses)

(photopolymerizable compns. containing two photoinitiators of different spectral sensitivities and, for image formation and preparation of printing plates)

L16 ANSWER 63 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:126516 CAPLUS

DN 110:126516

ED Entered STN: 03 Apr 1989

TI Quantum wires in indium gallium arsenide/indium phosphide fabricated by holographic photolithography

AU Miller, B. I.; Shahar, A.; Koren, U.; Corvini, P. J.

CS AT and T Bell Teleph. Lab., Holmdel, NJ, 07733, USA

SO Applied Physics Letters (1989), 54(2), 188-90

CODEN: APPLAB; ISSN: 0003-6951

DT Journal

LA English

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 74

AB Quantum wires 300-400 Å wide were fabricated by the title method from a wafer with a single InGaAs well. The wires were recoated with InP by organometallic VPE. The structure is 1-dimensional. The luminescent properties are described.

ST gallium indium arsenide quantum wire; epitaxy organometallic

vapor phase arsenide; phosphide indium coating quantum well; luminescence gallium indium arsenide wire

IT Luminescence  
(of gallium indium arsenide quantum wires)

IT Semiconductor devices  
(quantum wires, gallium indium arsenide-indium phosphide, preparation and properties of)

IT Lithography  
(holog., of gallium indium arsenide for quantum wires)

IT Holography  
(lithog., of gallium indium arsenide for quantum wires)

IT Epitaxy  
(vapor-phase, metalorg., of indium phosphide for gallium indium arsenide quantum wires)

IT 22398-80-7, Indium phosphide, uses and miscellaneous  
RL: USES (Uses)  
(quantum wire from gallium indium arsenide coated with)

IT 106070-25-1, Gallium indium arsenide  
RL: DEV (Device component use); USES (Uses)  
(quantum wire from, holog. photolithog. in fabrication of)

L16 ANSWER 64 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1988:590909 CAPLUS  
DN 109:190909  
ED Entered STN: 25 Nov 1988  
TI Photoinitiation of polymerization of methyl methacrylate by vanadium(V) organometallic complexes  
AU Aliwi, S. M.  
CS Sol. Energy Res. Cent., Baghdad, Iraq  
SO Journal of Photochemistry and Photobiology, A: Chemistry (1988), 44(2), 179-86  
CODEN: JPPCEJ; ISSN: 1010-6030  
DT Journal  
LA English  
CC 35-3 (Chemistry of Synthetic High Polymers)  
AB VO(OEt)3, VO(OSiPh3)3, VO(OCOPh)3, VOQ2SC3H7 (Q = 8-quinolyloxo), and VO(C9H7)3 (C9H7 = indenyl) were used as radical initiators for photopolymerization of Me methacrylate. The initiating radicals were derived from the complex ligand with reduction of V5+ to V4+. The kinetics of the photopolymerization was determined  
ST vanadium catalyst photochem polymerization methacrylate; kinetics photopolymerization methacrylate vanadium catalyst  
IT Kinetics of polymerization  
(photochem., of Me methacrylate in presence of vanadium complexes, mechanism in relation to)  
IT Polymerization  
(photochem., of Me methacrylate in presence of vanadium complexes, mechanism of)  
IT Polymerization catalysts  
(photochem., vanadium complexes, for Me methacrylate, kinetics and mechanism in relation to)  
IT 1686-22-2 18822-50-9 25578-30-7 39377-75-8 117275-01-1  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for photochem. polymerization of Me methacrylate, kinetics and mechanism in relation to)  
IT 80-62-6, Methyl methacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymerization of, photochem., in presence of vanadium catalysts, kinetics and mechanism of)  
IT 9011-14-7P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, vanadium catalysts for)

L16 ANSWER 65 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1988:493645 CAPLUS

DN 109:93645  
 ED Entered STN: 17 Sep 1988  
 TI Light sensitive organometallic compounds in  
 photopolymerization  
 AU Klingert, B.; Riediker, M.; Roloff, A.  
 CS Cent. Res. Lab., Ciba-Geigy A.-G., Basel, CH-4002, Switz.  
 SO Comments on Inorganic Chemistry (1988), 7(3), 109-38  
 CODEN: COICDZ; ISSN: 0260-3594  
 DT Journal; General Review  
 LA English  
 CC 35-0 (Chemistry of Synthetic High Polymers)  
 AB Polymerization methods to manufacture printed and integrated circuits were  
 reviewed  
 with 92 refs. with emphasis on evaluation of organometallics as  
 photoinitiators for these processes. The use of organometallic  
 compds. in cationic and radical polymerization initiation was discussed.  
 ST review photochem polymn organometallic catalyst; cationic  
 photopolymn organometallic catalyst review; radical  
 photopolymn organometallic catalyst review; light  
 sensitive organometallic photopolymn review  
 IT Organometallic compounds  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, light-sensitive, for photochem. polymerization, evaluation of)  
 IT Polymerization catalysts  
 (cationic, photochem., light-sensitive organometallic compds.  
 as, evaluation of)  
 IT Polymerization  
 (cationic, photochem., mechanism of, in presence of light-sensitive  
 organometallic compds.)  
 IT Polymerization catalysts  
 (photochem., light-sensitive organometallic compds. as,  
 evaluation of)  
 IT Polymerization  
 (photochem., radical, mechanism of, in presence of light-sensitive  
 organometallic compds.)  
 IT Polymerization catalysts  
 (radical, photochem., light-sensitive organometallic compds.  
 as, evaluation of)

L16 ANSWER 66 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1988:422320 CAPLUS  
 DN 109:22320  
 ED Entered STN: 22 Jul 1988  
 TI Recent developments in organic solid-phase photochemistry  
 AU Meng, Jiben  
 CS Dep. Chem., Nankai Univ., Tianjin, Peop. Rep. China  
 SO Youji Huaxue (1988), 8(2), 104-9  
 CODEN: YCHHDX; ISSN: 0253-2786  
 DT Journal; General Review  
 LA Chinese  
 CC 21-0 (General Organic Chemistry)  
 Section cross-reference(s): 25, 29  
 AB A review with 22 refs. on the recent developments in the following areas  
 of organic solid-phase photochem.: the photoredn. reaction in benzophenones,  
 the organometallic solid-state photoreaction, the organic  
 photoreaction in solid-state at low temperature, the four-center  
 photopolymn. in crystalline state, the photochromism of organic crystals,  
 etc.  
 ST photochem org solid phase review  
 IT Photochemistry  
 (organic solid-phase)

L16 ANSWER 67 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1987:224344 CAPLUS  
 DN 106:224344

ED Entered STN: 26 Jun 1987  
 TI Supported photoinitiator  
 IN Bany, Stephen W.; Wood, Leigh E.  
 PA Minnesota Mining and Manufacturing Co., USA  
 SO Eur. Pat. Appl., 26 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM G03C001-68  
 CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 36

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 203829	A2	19861203	EP 1986-304133	19860530
	EP 203829	A3	19880817		
	EP 203829	B1	19910102		
	R: CH, DE, FR, GB, IT, LI				
	US 4677137	A	19870630	US 1985-740231	19850531
	AU 8657117	A	19861204	AU 1986-57117	19860505
	AU 584193	B2	19890518		
	CA 1262122	A1	19891003	CA 1986-509178	19860514
	BR 8602234	A	19870113	BR 1986-2234	19860516
	DK 8602498	A	19861201	DK 1986-2498	19860528
	JP 61278507	A	19861209	JP 1986-123865	19860530
	JP 07068292	B	19950726		
PRAI	US 1985-740231	A	19850531		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 203829	ICM	G03C001-68
	IPCI	G03C0001-68 [ICM,4]
	IPCR	C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0002-54 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-02 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C*]; C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]
US 4677137	IPCI	C08F0002-50; C08F0002-46 [C*]
	IPCR	C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0002-54 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-02 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C*]; C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]
	NCL	522/031.000; 502/150.000; 502/151.000; 502/152.000; 502/154.000; 502/155.000; 502/161.000; 502/162.000; 502/164.000; 502/522.000; 522/083.000; 522/099.000; 522/172.000; 526/279.000; 528/033.000
AU 8657117	IPCI	C08G0059-68 [ICM,4]; C08G0059-00 [ICM,4,C*]; C08G0077-38 [ICS,4]; C08G0077-00 [ICS,4,C*]; C09D0007-12 [ICS,4]; C08J0007-04 [ICS,4]; C08J0007-00 [ICS,4,C*]
	IPCR	C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0002-54 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-02 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C*]; C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]
CA 1262122	IPCI	G03C0001-68 [ICM,4]
	IPCR	C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0002-54 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-02 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C*];

BR 8602234 IPCI C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029  
 IPCR [I,C\*]; G03F0007-029 [I,A]  
 C08F0004-02 [ICM,4]; C08F0004-00 [ICM,4,C\*]  
 C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08F0002-46  
 [I,C\*]; C08F0002-50 [I,A]; C08F0002-54 [I,A];  
 C08F0004-00 [I,C\*]; C08F0004-00 [I,A]; C08F0004-02  
 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C\*];  
 C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029  
 [I,C\*]; G03F0007-029 [I,A]  
 DK 8602498 IPCI C08G [ICM,4]  
 IPCR C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08F0002-46  
 [I,C\*]; C08F0002-50 [I,A]; C08F0002-54 [I,A];  
 C08F0004-00 [I,C\*]; C08F0004-00 [I,A]; C08F0004-02  
 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C\*];  
 C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029  
 [I,C\*]; G03F0007-029 [I,A]  
 JP 61278507 IPCI C08F0004-00 [ICM,4]; C08G0059-70 [ICS,4]; C08G0059-00  
 [ICS,4,C\*]  
 IPCR C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08F0002-46  
 [I,C\*]; C08F0002-50 [I,A]; C08F0002-54 [I,A];  
 C08F0004-00 [I,C\*]; C08F0004-00 [I,A]; C08F0004-02  
 [I,A]; C08G0059-70 [I,A]; C08G0077-00 [I,C\*];  
 C08G0077-38 [I,A]; C08G0077-42 [I,A]; G03F0007-029  
 [I,C\*]; G03F0007-029 [I,A]

OS MARPAT 106:224344

AB A supported initiator for the radiation-activated polymerization of a cationically polymerizable compound is comprised of a dispersible particulate carrier and a photocatalytic ionic salt of an onium or an organometallic complex cation with a halogen-containing complex anion of a metal or metalloid. The cured composition prepared using the supported initiator is useful as a release coating for a pressure-sensitive adhesive material. Fumed silica was dispersed in a solution of triphenylsulfonium hexafluoroantimonate in EtOH and CH<sub>2</sub>Cl<sub>2</sub>, the solvents evaporated, air-dried, and pulverized to give a free flowing powder. The powder was mixed with a epoxypolysiloxane, spread onto a polypropylene film, and exposed to a medium-pressure Hg lamp to give a release coating fro an adhesive material.

ST supported photoinitiator photopolymer release coating; adhesive release coating supported photoinitiator; onium organometallic complex

IT Bentonite, uses and miscellaneous

RL: USES (Uses)

(carriers, for supported photoinitiators)

IT Siloxanes and Silicones, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(epoxy, crosslinking of, by supported photoinitiators)

IT Polymerization catalysts

(photochem., supported, preparation of)

IT Adhesives

(pressure-sensitive, release coatings for, prepared by crosslinking of epoxy siloxanes using supported photoinitiators)

IT Epoxy resins, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(siloxane-, crosslinking of, by supported photoinitiators)

IT 1314-23-4, Zirconium dioxide, uses and miscellaneous 1344-28-1, Aluminum oxide, uses and miscellaneous 7631-86-9, Silica, uses and miscellaneous 7782-42-5, Graphite, uses and miscellaneous 9004-34-6, Cellulose, uses and miscellaneous 13463-67-7, Titanium dioxide, uses and miscellaneous  
 RL: USES (Uses)

(carriers, for supported photoinitiators)

IT 52754-92-4, Diphenyliodoniumhexafluoroantimonate 57835-99-1,

Triphenylsulfoniumhexafluorophosphate 57840-38-7,

Triphenylsulfoniumhexafluoroantimonate 57900-42-2,

Triphenylsulfoniumhexafluoroarsenate 92140-34-6 108493-52-3,

4-Hydroxyphenyldiphenylsulfoniumhexafluoroantimonate 108493-54-5



108493-56-7, 4-Dodecylphenyldiphenylsulfoniumhexafluoroantimonate  
108493-58-9, 4-Dodecylphenylphenyliodoniumhexafluoroantimonate  
108493-59-0, 4-Dodecylphenylphenyliodoniumhexafluoroarsenate  
108493-60-3, 4-Dodecylphenylphenyliodoniumhexafluorophosphate  
RL: USES (Uses)

(photopolymn. initiator, supported, for epoxy silanes for  
release coatings)

L16 ANSWER 68 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1987:223848 CAPLUS  
DN 106:223848  
ED Entered STN: 26 Jun 1987  
TI Light emission from quantum-box structure by current injection  
AU Miyamoto, Yasuyuki; Cao, Ming; Shingai, Yasushi; Furuya, Kazuhito;  
Suematsu, Yasuharu; Ravikumar, K. G.; Arai, Shigehisa  
CS Dep. Phys. Electron., Tokyo Inst. Technol., Tokyo, 152, Japan  
SO Japanese Journal of Applied Physics, Part 2: Letters (1987), 26(4),  
L225-L227  
CODEN: JAPLDS  
DT Journal  
LA English  
CC 73-10 (Optical, Electron, and Mass Spectroscopy and Other Related  
Properties)  
Section cross-reference(s): 76  
AB Laser emission from quantum-box structure by current injection was observed  
for the 1st time. GaInAsP/InP quantum-box structures were fabricated from  
1-dimensional quantum-well (quantum-film) structures grown by  
organometallic VPE. Holog. lithog., wet etching, and  
LPE regrowth techniques were used. A 3-dimensional quantum size effect  
was suggested by the wavelength shift of the light emission.  
ST light emission quantum box structure; gallium indium arsenide phosphide  
laser  
IT Lasers  
(semiconductor, quantum-box structure)  
IT 22398-80-7, Indium phosphide, uses and miscellaneous  
RL: USES (Uses)  
(laser from quantum-box structure of gallium indium arsenide phosphide  
and)  
IT 12645-36-2  
RL: DEV (Device component use); USES (Uses)  
(lasers from quantum-box structure of indium phosphide and)

L16 ANSWER 69 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1986:460957 CAPLUS  
DN 105:60957  
ED Entered STN: 23 Aug 1986  
TI Organometallic photoinitiated polymerizations  
AU Curtis, Hilary; Irving, Edward; Johnson, Brian F. G.  
CS Chem. Lab., Univ. Cambridge, Cambridge, CB2 1RL, UK  
SO Chemistry in Britain (1986), 22(4), 327-8,330  
CODEN: CHMBAY; ISSN: 0009-3106  
DT Journal; General Review  
LA English  
CC 35-0 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 29  
AB A review with 7 refs. Organometallic compds. are currently  
being investigated for use as photocatalysts in free-radical and cationic  
polymns. These compds. have the advantage of being efficient wide-band  
absorbers and produce highly reactive species on irradiation  
ST organometallic photoinitiator polymn review; catalyst  
organometallic photopolymn review  
IT Organometallic compounds  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for photochem. polymns.)  
IT Polymerization catalysts

(photochem., organometallic compds.)

L16 ANSWER 70 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1984:553584 CAPLUS  
DN 101:153584  
ED Entered STN: 27 Oct 1984  
TI Energy-polymerizable composition containing organometallic  
initiators  
IN Palazzotto, Michael; Hendrickson, William  
PA Minnesota Mining and Manufacturing Co., USA  
SO Eur. Pat. Appl., 50 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC C08F004-72; C08F004-80; C08G059-68; C08G077-08; C08G002-06; C08F002-50  
CC 42-10 (Coatings, Inks, and Related Products)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 109851	A2	19840530	EP 1983-307102	19831121
	EP 109851	A3	19850626		
	EP 109851	B1	19930901		
	R: CH, DE, FR, GB, IT, LI				
	US 5089536	A	19920218	US 1982-443660	19821122
	CA 1308733	C	19921013	CA 1983-440864	19831109
	AU 8321552	A	19840531	AU 1983-21552	19831121
	AU 563548	B2	19870716		
	JP 59108003	A	19840622	JP 1983-219316	19831121
	JP 05059921	B	19930901		
	EP 542716	A1	19930519	EP 1993-100344	19831121
	EP 542716	B1	19970625		
	R: CH, DE, FR, GB, IT, LI				
	US 5191101	A	19930302	US 1991-799046	19911126
	US 5385954	A	19950131	US 1993-9845	19930127
PRAI	US 1982-443660	A	19821122		
	US 1991-799046	A3	19911126		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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EP 109851	IC	C08F004-72; C08F004-80; C08G059-68; C08G077-08; C08G002-06; C08F002-50
	IPCI	C08F0004-72; C08F0004-80; C08F0004-00 [C*]; C08G0059-68; C08G0059-00 [C*]; C08G0077-08; C08G0077-00 [C*]; C08G0002-06; C08G0002-00 [C*]; C08F0002-50; C08F0002-46 [C*]
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C07F0007-00 [I,C*]; C07F0007-00 [I,A]; C07F0013-00 [I,C*]; C07F0013-00 [I,A]; C07F0015-00 [I,C*]; C07F0015-00 [I,A]; C07F0017-00 [I,C*]; C07F0017-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,C*]; C08F0004-00 [I,A]; C08F0004-42 [I,A]; C08F0004-72 [I,A]; C08F0008-00 [I,C*]; C08F0008-42 [I,A]; C08F0010-00 [I,C*]; C08F0010-00 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-68 [I,A]; C08G0065-00 [I,C*]; C08G0065-02 [I,A]; C08G0065-12 [I,A]; C08G0065-16 [I,A]; C08G0077-00 [I,C*]; C08G0077-08 [I,A]; C08G0085-00 [I,C*]; C08G0085-00 [I,A]
US 5089536	IPCI	C08F0002-50 [ICM,5]; C08F0002-46 [ICM,5,C*]; C08F0004-42 [ICS,5]; C08F0004-00 [ICS,5,C*]; C08F0016-32 [ICS,5]; C08F0016-18 [ICS,5]; C08F0016-00 [ICS,5,C*]; C08F0026-10 [ICS,5]; C08F0026-00 [ICS,5,C*]
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C07F0007-00 [I,C*]; C07F0007-00 [I,A]; C07F0013-00 [I,C*]; C07F0013-00 [I,A]; C07F0015-00 [I,C*]; C07F0015-00

[I,A]; C07F0017-00 [I,C\*]; C07F0017-00 [I,A];  
 C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0004-00  
 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A];  
 C08F0004-72 [I,A]; C08F0008-00 [I,C\*]; C08F0008-42  
 [I,A]; C08F0010-00 [I,C\*]; C08F0010-00 [I,A];  
 C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08G0059-68  
 [I,A]; C08G0065-00 [I,C\*]; C08G0065-02 [I,A];  
 C08G0065-12 [I,A]; C08G0065-16 [I,A]; C08G0077-00  
 [I,C\*]; C08G0077-08 [I,A]; C08G0085-00 [I,C\*];  
 C08G0085-00 [I,A]

NCL 522/016.000; 427/520.000; 427/521.000; 522/017.000;  
 522/018.000; 522/023.000; 522/026.000; 522/027.000;  
 522/028.000; 522/029.000; 522/031.000; 522/033.000;  
 522/038.000; 522/039.000; 522/049.000; 522/052.000;  
 522/063.000; 522/064.000; 522/065.000; 522/066.000;  
 522/099.000; 522/166.000; 522/167.000; 522/168.000;  
 522/169.000; 522/170.000; 522/172.000; 522/173.000;  
 522/181.000; 522/904.000; 526/115.000; 526/117.000;  
 526/120.000; 526/131.000; 526/154.000; 526/170.000;  
 526/171.000; 526/264.000; 526/288.000; 526/332.000;  
 526/333.000; 528/015.000; 528/092.000; 528/361.000;  
 528/411.000; 528/412.000; 556/007.000; 556/015.000;  
 556/016.000; 556/030.000

CA 1308733 IPCI C07F0011-00 [ICM,5]; C07F0015-00 [ICS,5]; C08F0004-42  
 [ICS,5]; C08F0004-00 [ICS,5,C\*]  
 IPCR C08F0002-00 [I,C\*]; C08F0002-00 [I,A]; C07F0007-00  
 [I,C\*]; C07F0007-00 [I,A]; C07F0013-00 [I,C\*];  
 C07F0013-00 [I,A]; C07F0015-00 [I,C\*]; C07F0015-00  
 [I,A]; C07F0017-00 [I,C\*]; C07F0017-00 [I,A];  
 C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0004-00  
 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A];  
 C08F0004-72 [I,A]; C08F0008-00 [I,C\*]; C08F0008-42  
 [I,A]; C08F0010-00 [I,C\*]; C08F0010-00 [I,A];  
 C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08G0059-68  
 [I,A]; C08G0065-00 [I,C\*]; C08G0065-02 [I,A];  
 C08G0065-12 [I,A]; C08G0065-16 [I,A]; C08G0077-00  
 [I,C\*]; C08G0077-08 [I,A]; C08G0085-00 [I,C\*];  
 C08G0085-00 [I,A]

AU 8321552 IPCI C08G0059-68; C08G0059-00 [C\*]; C08G0085-00  
 IPCR C08F0002-00 [I,C\*]; C08F0002-00 [I,A]; C07F0007-00  
 [I,C\*]; C07F0007-00 [I,A]; C07F0013-00 [I,C\*];  
 C07F0013-00 [I,A]; C07F0015-00 [I,C\*]; C07F0015-00  
 [I,A]; C07F0017-00 [I,C\*]; C07F0017-00 [I,A];  
 C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0004-00  
 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A];  
 C08F0004-72 [I,A]; C08F0008-00 [I,C\*]; C08F0008-42  
 [I,A]; C08F0010-00 [I,C\*]; C08F0010-00 [I,A];  
 C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08G0059-68  
 [I,A]; C08G0065-00 [I,C\*]; C08G0065-02 [I,A];  
 C08G0065-12 [I,A]; C08G0065-16 [I,A]; C08G0077-00  
 [I,C\*]; C08G0077-08 [I,A]; C08G0085-00 [I,C\*];  
 C08G0085-00 [I,A]

JP 59108003 IPCI C08F0002-50; C08F0002-46 [C\*]; C08F0004-72; C08F0004-00  
 [C\*]; C08G0085-00; C07F0007-00 [ICA]; C07F0015-00  
 [ICA]; C08F0008-42 [ICA]; C08F0008-00 [ICA,C\*];  
 C08G0059-68 [ICA]; C08G0059-00 [ICA,C\*]  
 IPCR C08F0002-00 [I,C\*]; C08F0002-00 [I,A]; C07F0007-00  
 [I,C\*]; C07F0007-00 [I,A]; C07F0013-00 [I,C\*];  
 C07F0013-00 [I,A]; C07F0015-00 [I,C\*]; C07F0015-00  
 [I,A]; C07F0017-00 [I,C\*]; C07F0017-00 [I,A];  
 C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0004-00  
 [I,C\*]; C08F0004-00 [I,A]; C08F0004-42 [I,A];  
 C08F0004-72 [I,A]; C08F0008-00 [I,C\*]; C08F0008-42  
 [I,A]; C08F0010-00 [I,C\*]; C08F0010-00 [I,A];  
 C08G0059-00 [I,C\*]; C08G0059-00 [I,A]; C08G0059-68

[I,A]; C08G0065-00 [I,C\*]; C08G0065-02 [I,A];  
C08G0065-12 [I,A]; C08G0065-16 [I,A]; C08G0077-00  
[I,C\*]; C08G0077-08 [I,A]; C08G0085-00 [I,C\*];  
C08G0085-00 [I,A]

EP 542716 IPCI C08F0016-12 [ICM,5]; C08F0016-00 [ICM,5,C\*];  
C08G0059-68 [ICS,5]; C08G0059-00 [ICS,5,C\*];  
C08G0065-12 [ICS,5]; C08G0065-00 [ICS,5,C\*];  
C08G0077-08 [ICS,5]; C08G0077-00 [ICS,5,C\*];  
C08F0004-72 [ICS,5]; C08F0004-00 [ICS,5,C\*]

ECLA C08F016/12; C08G059/68; C08G065/12; C08G077/08;  
C08G079/00

US 5191101 IPCI C07F0017-02 [ICM,5]; C07F0017-00 [ICM,5,C\*];  
C07F0013-00 [ICS,5]

IPCR C08F0002-46 [I,C\*]; C08F0002-50 [I,A]; C08F0010-00  
[I,C\*]; C08F0010-00 [I,A]; C08F0016-00 [I,C\*];  
C08F0016-12 [I,A]; C08G0059-00 [I,C\*]; C08G0059-68  
[I,A]; C08G0065-00 [I,C\*]; C08G0065-12 [I,A];  
C08G0077-00 [I,C\*]; C08G0077-08 [I,A]; C08G0079-00  
[I,C\*]; C08G0079-00 [I,A]

NCL 556/047.000; 556/060.000; 556/142.000; 556/144.000

US 5385954 IPCI C08F0002-50 [ICM,6]; C08F0002-46 [ICM,6,C\*];  
C08F0004-44 [ICS,6]; C08F0004-00 [ICS,6,C\*]

IPCR C08F0010-00 [I,A]; C08F0010-00 [I,C\*]; C08F0016-00  
[I,C\*]; C08F0016-12 [I,A]; C08G0059-00 [I,C\*];  
C08G0059-68 [I,A]; C08G0065-00 [I,C\*]; C08G0065-12  
[I,A]; C08G0077-00 [I,C\*]; C08G0077-08 [I,A];  
C08G0079-00 [I,A]; C08G0079-00 [I,C\*]

NCL 522/029.000; 522/066.000; 522/170.000; 522/181.000

ECLA C08F010/00+4/72; C08F016/12; C08G059/68; C08G065/12;  
C08G077/08; C08G079/00

AB The title composition comprises a cationically polymerizable material and an  
ionic salt of an organometallic complex cation as catalyst, the  
salt being capable of adding an intermediate strength nucleophile or upon  
photolysis capable of liberating  $\geq 1$  coordination site, and the  
metal being from Group IVB, VB, VIB, VIIB, or VIIIB. Thus, a stock solution  
comprised 1 part vinylcyclohexene dioxide and 1 part 3,4-  
epoxycyclohexylmethyl 3,4-epoxycyclohexanecarboxylate. A mixture of above  
stock solution 10, MeCN 1.0, and ( $\eta 6$ -mesitylene)( $\eta 5$ -  
cyclopentadienyl)iron(1+) hexafluoroantimonate [92140-24-4] 0.1 part was  
coated on poly(vinylidene chloride)-primed 75- $\mu$  polyester and the  
coating allowed to air dry for 30 min. The coated sample was exposed to a  
150-W spotlight and a non-tacky surface was formed in 30 s.

ST diepoxide copolymn photocuring coating; iron complex photopolymn  
catalyst; epoxycyclohexanecarboxylate epoxycyclohexylmethyl copolymer  
coating

IT Polymerization catalysts  
(cationic, photochem., organometallic compds., for  
epoxycyclohexylmethyl epoxycyclohexanecarboxylate with vinylcyclohexene  
dioxide, for coatings)

IT Coating materials  
(photocurable, epoxycyclohexylmethyl epoxycyclohexanecarboxylate-  
vinylcyclohexane dioxide copolymer, manufacture of, catalysts for)

IT 92359-77-8  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for polymerization of coating solns.)

IT 7439-89-6D, complexes, polystyrene derivs. 7439-95-4D, complexes,  
polystyrene derivs. 9003-53-6D, iron and manganese complex derivs.

12100-39-9	31666-55-4	32757-45-2	33435-42-6	38834-27-4
38959-35-2	43105-67-5	49772-11-4	51109-59-2	51812-07-8
52202-14-9	59183-95-8	65335-05-9	70755-99-6	73066-26-9
79244-34-1	92140-24-4	92140-25-5	92140-27-7	92140-28-8
92140-30-2	92140-32-4	92140-33-5	92140-34-6	92140-35-7
92140-36-8	92140-37-9	92140-38-0	92140-39-1	92140-40-4
92140-41-5	92140-42-6	92140-43-7	92140-44-8	92140-45-9
92140-46-0	92174-05-5	92174-07-7	92174-09-9	92174-11-3

92309-48-3 92309-49-4 92309-50-7 92309-51-8 92309-52-9

92338-05-1 92342-90-0 92345-32-9

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for polymerization of epoxycyclohexylmethyl  
epoxycyclohexanecarboxylate with vinylcyclohexene dioxide, for  
coatings)

IT 53895-44-6P

RL: TEM (Technical or engineered material use); PREP (Preparation); USES  
(Uses)

(coatings, manufacture of, catalysts for)

L16 ANSWER 71 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1984:415033 CAPLUS

DN 101:15033

ED Entered STN: 07 Jul 1984

TI Photopolymerization with organometallic salts

IN Irving, Edward; Johnson, Brian Frederick Gilbert; Meier, Kurt

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 30 pp.

CODEN: EPXXDW

DT Patent

LA German

IC G03C001-68; C08G059-68; C08G065-10

CC 74-4 (Radiation Chemistry; Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 42, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 94914	A2	19831123	EP 1983-810206	19830513
	EP 94914	A3	19840208		
	EP 94914	B1	19860924		
	R: CH, DE, FR, GB, IT, LI, NL, SE				
	CA 1300307	C	19920505	CA 1983-428303	19830517
	JP 58213019	A	19831210	JP 1983-86010	19830518
	JP 02061973	B	19901221		
PRAI	GB 1982-14609	A	19820519		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 94914	IC	G03C001-68; C08G059-68; C08G065-10
	IPCI	G03C0001-68; C08G0059-68; C08G0059-00 [C*]; C08G0065-10; C08G0065-00 [C*]
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-18 [I,A]; C08G0059-68 [I,A]; C08G0065-00 [I,C*]; C08G0065-10 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]
CA 1300307	IPCI	C08G0059-68 [ICM,5]; C08G0059-00 [ICM,5,C*]; C08G0065-10 [ICS,5]; C08G0065-00 [ICS,5,C*]; C08F0004-42 [ICS,5]; C08F0004-00 [ICS,5,C*]; B01J0031-12 [ICS,5]; B01J0031-20 [ICS,5]; B01J0031-16 [ICS,5,C*]; B29C0035-08 [ICS,5]
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-18 [I,A]; C08G0059-68 [I,A]; C08G0065-00 [I,C*]; C08G0065-10 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]
JP 58213019	IPCI	C08G0059-68; C08G0059-00 [C*]; G03C0001-71
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; C08G0059-00 [I,C*]; C08G0059-00 [I,A]; C08G0059-18 [I,A]; C08G0059-68 [I,A]; C08G0065-00 [I,C*]; C08G0065-10 [I,A]; G03F0007-029 [I,C*]; G03F0007-029 [I,A]

OS MARPAT 101:15033

AB Photopolymerizable compns. are described which are prepared  
without the use of flammable or toxic solvents. These compns., which are  
useful for producing printing plates, integrated circuits, protective

coatings and the like, are composed of a 1,2-epoxy group-containing compound or a mixture of such a compound and a salt of the formula  $[RM(CO)_a]_nM_1X_n$  (R = arene or dienylium; M = Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Nb, Mo, Ru, Rh, Pd, Ag, Ta, W, Re, Os, Ir, Pt, or Au; M<sub>1</sub> = a metal or nonmetal; X = Cl, F, or OH; a > 0; and n = 4, 5, or 6). Thus, a coating composed of the diglycidyl ether of 2,2-bis(4-hydroxyphenyl)propane containing 2 weight% triscarbonyl(cyclohexa-1,3-dienylium)iron tetrafluoroborate was exposed to a Hg vapor lamp to give a relatively tack-free film.

- ST epoxide photopolymerizable photoimaging compn; metal carbonyl photopolymerizable photoimaging compn
- IT Phenolic resins, uses and miscellaneous  
RL: USES (Uses)  
(epoxidized, photopolymerizable compns. containing metal carbonyl derivative and, solvent-free, for photoimaging)
- IT Epoxides  
RL: USES (Uses)  
(photopolymerizable compns. containing metal carbonyl derivs. and, solvent-free, for photoimaging)
- IT Photoimaging compositions and processes  
(photopolymerizable, solvent-free, containing epoxy compound and metal carbonyl derivative)
- IT Carbonyls  
RL: USES (Uses)  
(transition metal, photopolymerizable compns. containing epoxide and, solvent-free, for photoimaging)
- IT 7439-88-5D, organic derivs., salts 7439-89-6D, organic derivs., salts  
7439-96-5D, organic derivs., salts 7439-98-7D, organic derivs., salts  
7440-02-0D, organic derivs., salts 7440-03-1D, organic derivs., salts  
7440-04-2D, organic derivs., salts 7440-05-3D, organic derivs., salts  
7440-06-4D, organic derivs., salts 7440-15-5D, organic derivs., salts  
7440-16-6D, organic derivs., salts 7440-18-8D, organic derivs., salts  
7440-22-4D, organic derivs., salts 7440-25-7D, organic derivs., salts  
7440-32-6D, organic derivs., salts 7440-33-7D, organic derivs., salts  
7440-47-3D, organic derivs., salts 7440-48-4D, organic derivs., salts  
7440-50-8D, organic derivs., salts 7440-57-5D, organic derivs., salts  
7440-62-2D, organic derivs., salts 12307-12-9 33678-01-2 38834-27-4  
51508-58-8 57812-97-2 65652-52-0 67770-48-3 83457-73-2  
85352-20-1 89743-28-2 89933-86-8 90613-78-8  
RL: USES (Uses)  
(photopolymerizable compns. containing epoxide and, solvent-free, for photoimaging)
- IT 2425-79-8 25036-25-3 25085-75-0D, epoxidized  
RL: USES (Uses)  
(photopolymerizable compns. containing metal carbonyl derivative and, for photoimaging)
- IT 1675-54-3 2386-87-0  
RL: USES (Uses)  
(photopolymerizable compns. containing metal carbonyl derivative and, solvent-free, for photoimaging)
- IT 17084-13-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aryltricarboxylmanganese bromide)
- IT 14516-54-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with methylnaphthalene in presence of aluminum chloride)
- IT 100-66-3, reactions 1077-16-3 1132-66-7 1321-94-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with pentacarbonylmanganese bromide in presence of aluminum chloride)

L16 ANSWER 72 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1981:444221 CAPLUS  
DN 95:44221  
ED Entered STN: 12 May 1984  
TI Polymerizable organometallic composition of an ethylenic

derivative and aluminum  
 IN Gallay, Jacques  
 PA Rhone-Poulenc Industries SA, Fr.  
 SO Fr. Demande, 29 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 IC C08K009-04; C08K003-20; C08J003-22  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2447945	A1	19800829	FR 1979-2277	19790130
PRAI	FR 1979-2277	A	19790130		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 2447945	IC	C08K009-04; C08K003-20; C08J003-22
	IPCI	C08K0009-04; C08K0009-00 [C*]; C08K0003-20; C08K0003-00 [C*]; C08J0003-22 [ICA]; C08J0003-20 [ICA,C*]
	IPCR	C08F0004-00 [I,C*]; C08F0004-12 [I,A]; C08F0020-00 [I,C*]; C08F0020-06 [I,A]; C08K0009-00 [I,C*]; C08K0009-04 [I,A]

AB Acrylic acid, methacrylic acid, or a mixture of acrylic acid and a copolymerizable monomer is polymerized in the presence of an Al salt such as Al (OH)Cl<sub>2</sub>, Al<sub>2</sub>(OH)5Cl, Al<sub>2</sub>(OH)2.5Cl<sub>3</sub>(SO<sub>4</sub>)0.25, or an AlCl<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub> mixture to prepare polymer-modified Al salts which are compatible with polymers such as PVC [9002-86-2]. Thus, 26.5 parts acrylic acid was added to water containing 6.26 parts (as Al<sub>2</sub>O<sub>3</sub>) Al(OH)Cl<sub>2</sub> and photopolymd. in the presence of iso-ProCHBzPh to prepare polymer-modified Al(OH)Cl<sub>2</sub>.

ST aluminum compd modification polyacrylate; PVC compatibility aluminum compd; filler aluminum compd polymer

IT Polymerization  
 (radical, of (meth)acrylic acid on aluminum compds.)

IT 9002-86-2  
 RL: USES (Uses)  
 (fillers for, polymer-modified aluminum compds. as compatible)

IT 1344-28-1, uses and miscellaneous  
 RL: USES (Uses)  
 (fillers, containing polymer-modified alumina salts for compatibility with polymers)

IT 7446-70-ODP, reaction products with acrylic polymers 9003-01-4DP, reaction products with aluminum compds. 9003-06-9DP, reaction products with aluminum compds. 10043-01-3DP, reaction products with acrylic polymers 10284-64-7DP, reaction products with acrylic polymers 12042-91-ODP, reaction products with acrylic polymers 12445-51-1DP, reaction products with acrylic polymers 14215-15-7DP, reaction products with acrylic polymers 25087-26-7DP, reaction products with aluminum compds. 25214-69-1DP, reaction products with aluminum compds. 25322-25-2DP, reaction products with aluminum compds. 39290-78-3DP, reaction products with acrylic polymers 73565-50-1DP, reaction products with aluminum compds.  
 RL: PREP (Preparation)  
 (manufacture of polymer-compatible)

L16 ANSWER 73 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1979:130696 CAPLUS

DN 90:130696

ED Entered STN: 12 May 1984

TI Photosensitive imaging compositions

IN Morita, Junpei; Maeda, Sajiro; Shimomura, Takefumi; Kuki, Hiroaki; Seki, Kazuyoshi

PA Nitto Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent  
LA Japanese  
IC G03C001-68  
CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 53111719	A	19780929	JP 1977-27221	19770311
	JP 57021695	B	19820508		
PRAI	JP 1977-27221	A	19770311		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 53111719	IC	G03C001-68
	IPCI	G03C0001-68; G03C0001-71; G03F0007-02; H05K0003-00
	IPCR	G03F0007-038 [I,C*]; G03F0007-038 [I,A]; G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G03F0007-34 [I,C*]; G03F0007-34 [I,A]; H05K0003-00 [I,C*]; H05K0003-00 [I,A]

AB An organometallic compound selected from Ti or Sn compds. having  $\geq 1$  alkoxy or acyloxy group is added to peel development-type photoimaging compns. which contain 3-50 weight % colorless particles whose particle size is  $\leq 0.1 \mu$  to improve their filtering and coating properties. Thus, a linear saturated polyester (Bairon 300 from Toyo Boseki K. K.) 100, a  $\text{CaCO}_3$  powder 12, dibutyltin dilaurate 0.12, an acrylic compound (Aronix M-8030; from Toa Gosei K. K.) 100, benzoin iso-Pr ether 3.0, Et Violet 0.05, and p-methoxyphenol 0.1 part were added to PhMe 400 parts to give a photosensitive composition with improved coating, flow, and filtering properties and good image resolution

ST titanium compd photosensitive resin imaging; tin compd photosensitive resin imaging; photoimaging resin titanium tin

IT Polyesters, uses and miscellaneous  
RL: USES (Uses)  
(photopolymerizable compns. containing organic titanium or tin compound and, for relief image formation by peel development)

IT Resists  
(photo-, containing organic titanium or tin compound for peel development)

IT Photoimaging compositions and processes  
(photopolymerizable, containing organic titanium or tin compound for relief image formation by peel development)

IT 84-51-5 2390-59-2 6652-28-4 7631-86-9, uses and miscellaneous  
9011-14-7 25214-69-1 29294-36-8 61287-25-0  
RL: USES (Uses)  
(photopolymerizable compns. containing organic titanium or tin compound and, for relief image formation by peel development)

IT 77-58-7 94-96-2D, titanium complexes 546-68-9 5593-70-4  
7440-32-6D, octylene glycol complexes  
RL: USES (Uses)  
(photopolymerizable compns. containing, for relief image formation by peel development)

L16 ANSWER 74 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1978:424880 CAPLUS  
DN 89:24880  
ED Entered STN: 12 May 1984  
TI Photocrosslinkable organometallic polyesters  
AU Borden, Douglas G.  
CS Res. Lab., Eastman Kodak Co., Rochester, NY, USA  
SO Organomet. Polym., [Symp.] (1978), Meeting Date 1977, 115-27. Editor(s): Carraher, Charles E., Jr.; Sheats, John E.; Pittman, Charles U., Jr.  
Publisher: Academic, New York, N. Y.  
CODEN: 38EHA4  
DT Conference  
LA English  
CC 35-3 (Synthetic High Polymers)



Section cross-reference(s): 29, 74

AB High-mol. weight, light-crosslinkable polyesters were prepared from 2,5-bis(4-hydroxy-3-methoxybenzylidene)cyclopentanone, sebacyl chloride, tetrachlorobisphenol A or tetrabromobisphenol A, and one of 27 organometallic dihalides (containing 1 of 17 metals) in a mixture of ClCH<sub>2</sub>CH<sub>2</sub>Cl and CHCl<sub>2</sub>CH<sub>2</sub>Cl with Et<sub>3</sub>N as catalyst and acid acceptor. The polyesters were coated on Al or Cu, exposed imagewise to UV and visible light, and solvent developed to produce a photoresist incorporating 0.5-20% metal in the polymer.

ST polyester organometallic photo resist; photocrosslinkable polyester organometallic

IT Polymerization  
(of bis(hydroxymethoxybenzylidene)cyclopentanone with organometallic dihalides, sebacyl chloride and tetrahalobisphenol A)

IT Crosslinking  
(of organometallic polyesters, by light)

IT Polyesters, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(organometallic, preparation of photocrosslinkable)

IT Resists  
(photo-, photopolymerizable organometallic polyesters for)

IT	66990-98-5	66990-99-6	66991-00-2	66991-01-3	66991-02-4
	66991-03-5	66991-04-6	66991-05-7	66991-06-8	66991-07-9
	66991-08-0	66991-09-1	66991-10-4	66991-11-5	66991-12-6
	66991-13-7	66991-14-8	66991-15-9	66991-16-0	66991-17-1
	66991-18-2	66991-19-3	66991-20-6	66991-21-7	66991-22-8
	66991-23-9	66991-24-0	66991-25-1	66991-26-2	66991-27-3
	66991-28-4	66991-29-5	66991-30-8	66991-31-9	67017-33-8
	67017-34-9	67017-35-0	67017-36-1	67017-37-2	67017-38-3
	67017-39-4	67017-40-7	67017-41-8	67017-42-9	67047-63-6
	67047-64-7	67047-65-8	67047-66-9	67063-17-6	67068-68-2
	67068-69-3	67072-03-1			

RL: USES (Uses)  
(photocrosslinkable)

L16 ANSWER 75 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1977:493583 CAPLUS

DN 87:93583

ED Entered STN: 12 May 1984

TI Radiation-produced colored photopolymer systems

IN Lewis, James Marvin; Newyear, Raymond Willis

PA Horizons Inc., Division of Horizons Research, Inc., USA

SO U.S., 9 pp. Division of U.S. 3,954,468.

CODEN: USXXAM

DT Patent

LA English

IC G03C001-68

INCL 096115000P

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4033773	A	19770705	US 1976-656260	19760209
	US 3954468	A	19760504	US 1974-500931	19740827
PRAI	US 1974-500931	A3	19740827		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 4033773	IC	G03C001-68
	INCL	096115000P
	IPCI	G03C0001-68
	IPCR	G03F0007-09 [I,C*]; G03F0007-105 [I,A]
	NCL	430/282.100; 430/915.000; 430/925.000; 430/926.000;

522/029.000; 522/030.000; 522/048.000; 522/116.000;  
522/167.000

US 3954468 IPCI G03C0005-00; G03C0005-24; G03C0007-00; G03C0001-68  
IPCR G03F0007-09 [I,C\*]; G03F0007-105 [I,A]  
NCL 430/294.000; 430/296.000; 430/331.000; 430/942.000;  
430/967.000

AB Photopolymerizable compns. giving colored images are composed of  
an N-vinyl monomer 100-300, an I-containing activator 15-300, a phenolic  
compound ≤100, and an acid leachable dye 0.005-5 parts by weight,  
dispersed in an alc.-soluble, acid-insol. binder.. Optionally ≤1  
organometallic compound may be added to sensitize the composition to  
x-rays and electron beams. Thus, to N-vinylcarbazole 150,  
2,6-di-tert-butylcresol 50, CHI3 100, Ph3Bi 50, and Bakelite 251 500 g  
dissolved in a solvent containing PhMe 3000, MeCOEt 3000, and MeOH 2000 cm3  
was added a solution of 3,3',4'-trimethyloxathiazolocarbocyanine iodide 0.2 g  
dissolved in CH2Cl2 250 and DMSO 250 cm3. This solution was coated on a  
glass plate, electron-beam exposed, and developed with 100% HCO2H for 20  
s. The color d. of the red image trace written at 1.0 + 105 cm/s  
was 3+ when measured with a blue filter in the densitometer.

ST relief color photoimaging compn; acid leachable dye photoimaging

IT Photoimaging compositions and processes  
(photopolymerizable, containing N-vinyl monomer, iodine-containing  
activator, phenolic compound, and acid-leachable dye)

IT 128-37-0, properties  
RL: PRP (Properties)  
(photoimaging compns. containing N-vinyl monomer, acid-leachable dye, and  
for colored relief images)

IT 75-47-8 603-33-8  
RL: USES (Uses)  
(photoimaging compns. containing N-vinyl monomer, acid-leachable dye, and,  
for colored relief images)

IT 2646-15-3 63945-56-2  
RL: USES (Uses)  
(photoimaging compns. containing iodine-containing activator, N-vinyl  
monomer,  
and, for colored relief images)

IT 79-39-0 88-12-0, uses and miscellaneous 110-26-9 1072-63-5  
1484-13-5 1557-08-0 2372-96-5 3485-84-5  
RL: USES (Uses)  
(photoimaging compns. containing iodine-containing activator, acid-leachable  
dye, and, for colored relief images)

L16. ANSWER 76 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1976:502300 CAPLUS

DN 85:102300

ED Entered STN: 12 May 1984

TI Photocrosslinkable polymers incorporating metals in the polymer chain

AU Borden, Douglas G.

CS UK

SO Research Disclosure (1976), 143, 23 (No. 14339)  
CODEN: RSDSBB; ISSN: 0374-4353

DT Journal; Patent

LA English

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI RD 143039		19760310		
PRAI RD 1976-143039		19760310		

AB A soluble photocrosslinkable composition for lithog. plates, photoresists and  
electron resists is comprised of a linear polyester or a polycarbonate  
containing a metal selected from IIIA, IVA, VA, VIII, IVB, VB, VIB and VIIB  
groups in the polymer chain together with photocrosslinkable conjugated  
groups. The metal is preferably present in the polymer in the range of  
0.1-10.0% and the polymer is prepared by solution or interfacial  
polycondensation of a biphenol compound with an acid metallic dihalide.

Thus, a Hf-containing photosensitive polymer prepared from tetrachlorobisphenol A, hafnicene dichloride, divanillalcyclopentanone and sebacyl chloride was dissolved in 1,1,2-trichloroethane (5% volume solution), coated on a 1.5 mil Cu-clad elec. circuit board, dried at 50° for 30 min, exposed to a uv radiation source (Colight Xposer) through a neg. for 2 min, developed in a 1:1 mixture of 1,2-dichloroethane and 1,1,2-trichloroethane, and baked at 50° for 30 min to give a resist pattern which was resistant to etching by an FeCl<sub>3</sub> solution

ST photopolymerizable organometallic polymer photoresist

IT Polyesters, uses and miscellaneous

RL: USES (Uses)

(metal-containing, for photoresists and photolithog. plates)

IT Resists

(photo-, photopolymerizable compns. containing methyl-containing polyesters for)

IT Lithographic plates

(photopolymerizable compns. for, containing metal-containing polyesters)

IT 79-95-8D, Phenol, 4,4'-(1-methylethylidene)bis[2,6-dichloro-, reaction products with divanillal cyclopentanone, sebacyl chloride and organometallic compound 111-19-3D, Decanedioyl dichloride, reaction products with divanillal cyclopentanone, tetrachlorobisphenol A and organometallic compound 2117-69-3D, Plumbane, dichlorodiphenyl-, reaction products with divanillal cyclopentanone, tetrachlorobisphenol A and sebacyl chloride 12116-66-4D, Hafnium, dichlorobis(η<sup>5</sup>-2,4-cyclopentadien-1-yl)-, reaction products with divanillal cyclopentanone, tetrachlorobisphenol A and sebacyl chloride 34829-06-6D, Cyclopentanone, bis[(4-hydroxy-3-methoxyphenyl)methylene]-, reaction products with tetrachlorobisphenol A, sebacyl chloride and organometallic compound

RL: USES (Uses)

(photopolymerizable compns. containing, for photoresists and lithog. plates)

L16 ANSWER 77 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1976:90914 CAPLUS

DN 84:90914

ED Entered STN: 12 May 1984

TI Stabilization of water-soluble photopolymerizing films

AU Kravchuk, V. A.; Smirnov, L.

CS Lvov, USSR

SO Poligrafiya (1975), (10), 29-30

CODEN: PLGFAH; ISSN: 0032-2717

DT Journal

LA Russian

CC 36-6 (Plastics Manufacture and Processing)

AB The highest resistance to oxidative photodegrdn. of water-soluble polyamides during their preparation by photopolymn. was observed in the presence of S-1 (silylamine derivative) [15325-29-8] as stabilizers. Stabilization of photopolymg. polyamide films was examined using S-1, 4,4'-methylenediphenol [620-92-8] and Stabilene-9 (Cu neoporphyrin complex) [58392-43-1] as photodegrdn. inhibitors. A mechanism for the inhibiting action on photodegrdn. of S-1 was suggested.

ST light stabilizer polyamide; amine arom stabilizer polyamide; phenol stabilizer polyamide; organometallic complex stabilizer polyamide

IT Light stabilizers

(for polyamides, aromatic amines as)

IT Polyamides, properties

RL: PRP (Properties)

(light stabilizers for, aromatic amines as)

IT Porphyrins

RL: USES (Uses)

(neo-, copper complexes, light stabilizers for polyamides)

IT Printing plates

(photopolymerizing polyamides, light stabilizers for)  
IT 620-92-8 15325-29-8  
RL: USES (Uses)

(light stabilizers, for photopolymerizing polyamides)  
IT 61798-27-4  
RL: USES (Uses)

(light stabilizers, for photopolymerizing polyamines)  
IT 7440-50-8D, Copper, complexes with neoporphyrins  
RL: USES (Uses)  
(light stabilizers, for polyamides)

L16 ANSWER 78 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1975:148524 CAPLUS

DN 82:148524

ED Entered STN: 12 May 1984

TI Photopolymerizing composition

IN Dudyak, V. A.; Kovalenko, B. V.; Kravchuk, V. A.; Lazarenko, E. T.; Rozum, O. F.

PA Fedorov, I., Ukrainian Printing Institute, USSR

SO U.S.S.R.

From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1974, 51(35), 171.

CODEN: URXXAF

DT Patent

LA Russian

IC G03F

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 440952	A1	19740925	SU 1972-1749566	19720215
PRAI	SU 1972-1749566	A	19720215		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
SU 440952	IC	G03F
	IPCI	G03F0007-10

AB A photopolymerizing composition was prepared containing a water-soluble copolyamide, an acrylic oligomer, a photosensitizer, a photoinitiator, and an initiator of thermopolymer. To stabilize the photopolymerizable coatings and to improve the quality of printed copies, an organosilicon compound (0.15-0.20 weight part by weight of copolyamide) was introduced into the composition

ST polyamide photopolymer photog; organosilicon photog photopolymer

IT Polyamides, uses and miscellaneous

RL: USES (Uses)

(photographic photopolymerizable compns. containing organosilicon compds. and)

IT Photographic emulsions

(silver-free, photopolymerizable polyamide compns. for, containing organosilicon compds.)

IT 7440-21-3D, Silicon, organometallics

RL: USES (Uses)

(photographic photopolymerizable polyamide compns. containing)

L16 ANSWER 79 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1974:404615 CAPLUS

DN 81:4615

ED Entered STN: 12 May 1984

TI Photopolymerization process for the manufacture of alternating copolymers of butadiene and acrylonitrile

IN Yukuta, Toshio; Iwami, Kouichi; Onishi, Akira; Iseda, Yutaka

PA Bridgestone Tire Co., Ltd.

SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C08D; C08G  
 INCL 204159240  
 CC 38-4 (Elastomers, Including Natural Rubber)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3795598	A	19740305	US 1970-80252	19701012
	JP 51009798	B	19760330	JP 1969-81548	19691014
PRAI	JP 1969-81548	A	19691014		
	JP 1969-81549	A	19691014		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3795598	IC	C08D; C08G
	INCL	204159240
	IPCI	C08D0001-00; C08D0001-12; C08F0001-16
	NCL	522/029.000; 430/288.100; 522/008.000; 522/012.000; 522/017.000; 522/022.000; 522/023.000; 522/026.000; 522/027.000; 522/028.000; 522/030.000; 522/177.000; 522/186.000; 526/338.000
JP 51009798	IPCI	C08F0236-12; C08F0236-00 [C*]; C08F0002-48; C08F0002-46 [C*]; C08F0002-06; C08F0002-04 [C*]

AB Rubberlike alternating acrylonitrile-butadiene copolymers were manufactured by photopolymerization in the presence of a metal halide and/or organometallic compound catalyst, a photosensitizer, and optionally an antigelling agent. Thus, 1.5 mmole aluminum trichloride [7446-70-0], 0.5 mmole chlorodiethylaluminum [96-10-6], 449 mmole acrylonitrile, 100 mmole butadiene, and 0.1 mmole of one of the following photosensitizers, quinoline [91-22-5], acetone [67-64-1], acetophenone [98-86-2], benzophenone [119-61-9],  $\beta$ -naphthylmethyl ketone [93-08-3], sulfolane [126-33-0], or diphenylsulfone [127-63-9] were polymerized 2 hr at 23-9 deg. with a high pressure Hg lamp to give rubbers in 12.8, 18.4, 31.5, 32.1, 44.1, 19.7, and 21.5% yield, resp., for the photosensitizers cited above compared with 6.3% for a sample without photosensitizer.

ST nitrile rubber photosensitizer; acrylonitrile butadiene copolymer photosensitizer; polymer photo nitrile rubber

IT Polymerization catalysts

(for nitrile rubber manufacture, with alternating structure)

IT Gelation

(inhibitors for, in manufacture of nitrile rubber with alternating structure)

IT Rubber, nitrile, preparation

(of alternating structure, catalyst, gelation inhibitors and photosensitizers for)

IT Light, chemical and physical effects

(sensitizers, and manufacture of nitrile rubber with alternating structure)

IT 96-10-6, uses and miscellaneous 563-43-9, uses and miscellaneous 1066-57-5 7446-70-0, uses and miscellaneous 7637-07-2, uses and miscellaneous 7646-78-8 7727-15-3 7787-47-5 10026-04-7 10294-33-4 10294-34-5 12075-68-2 13450-90-3

RL: CAT (Catalyst use); USES (Uses)

(catalyst, for manufacture of nitrile rubber with alternating structure)

IT 75-03-6 75-25-2 75-47-8 103-30-0 110-02-1 150-60-7 530-48-3 558-13-4 7553-56-2, uses and miscellaneous 7727-18-6

RL: USES (Uses)

(gelation inhibitors, in manufacture of nitrile rubber with alternating structure)

IT 67-64-1, uses and miscellaneous 90-13-1 91-20-3, uses and miscellaneous 91-22-5, uses and miscellaneous 93-08-3 98-86-2, uses and miscellaneous 119-61-9, uses and miscellaneous 120-12-7, uses and miscellaneous 126-33-0 127-63-9

RL: USES (Uses)  
(photosensitizers, for manufacture of nitrile rubber of alternating structure)

IT 86-74-8 92-06-8 119-64-2 591-50-4 624-38-4

RL: USES (Uses)  
(photosensitizers, for manufacture of nitrile rubber with alternating structure)

IT 9003-18-3  
(rubber, nitrile; of alternating structure, catalyst, gelation inhibitors and photosensitizers for)

L16 ANSWER 80 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1973:405909 CAPLUS

DN 79:5909

ED Entered STN: 12 May 1984

TI Photopolymerization catalyst comprising a metallocene and an active halogen-containing compound

IN McGinniss, Vincent D.

PA SCM Corp.

SO U.S., 8 pp.  
CODEN: USXXAM

DT Patent

LA English

IC B01J

INCL 204159150

CC 35-4 (Synthetic High Polymers)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3717558	A	19730220	US 1971-239709	19710330
PRAI	US 1971-239709	A	19710330		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3717558	IC	B01J
	INCL	204159150
	IPCI	B01J0001-10; B01J0001-12
	NCL	522/027.000; 430/916.000; 522/012.000; 522/026.000; 522/029.000; 522/066.000; 522/167.000; 522/904.000; 525/013.000; 525/014.000; 525/015.000; 525/036.000; 525/038.000; 525/039.000; 525/040.000

AB Photosensitive catalysts for the polymerization of vinyl monomers by uv irradiation  
were prepared from mixts. of activated halogen compds. with metallocenes. Thus, 2 parts of catalyst from 2 g of 8% cobaltocene [1277-43-6] in C6H4Et2 and 10 g benzenesulfonyl chloride [98-09-9] was mixed with 98 parts 50:50 hydroxyethyl acrylate [818-61-1]-melamine acrylate. A 3-mil film of the mixture on a glass sheet was cured to hardness by 10 min exposure to an uv lamp.

ST photopolymn catalyst vinyl monomer; metallocene vinyl  
photopolymn catalyst; halide vinyl photopolymn catalyst;  
cobaltocene vinyl polymn catalyst; benzenesulfonyl chloride  
photopolymn catalyst

IT Chlorides, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalysts, containing metallocenes, for polymerization of vinyl compds. by light)

IT Organometallic compounds

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for photopolymn. of vinyl monomers)

IT Polymerization catalysts

(halogen compds.-metallocenes, for vinyl compds., by uv light)

IT Vinyl compounds, polymers

RL: IMF (Industrial manufacture); PREP (Preparation)

(manufacture of, catalysts for photochem.)

IT Polymerization catalysts  
(metallocene-active halides, for vinyl compds. by light)

IT Polymerization  
(photochem., of vinyl compds.)

IT Vinyl compounds, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(polymerization of, photopolymn. catalysts for)

IT 90-13-1 98-09-9 532-27-4 1271-19-8 1277-43-6 12108-13-3  
41449-71-2  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts containing, for photopolymn. of vinyl monomers)

IT 1271-19-8 1271-28-9 1271-54-1 1277-43-6 12083-24-8 12091-64-4  
12108-13-3 26078-96-6 39358-56-0 41424-21-9  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing active halides, for polymerization of vinyl compds.  
by  
light)

IT 12079-69-5  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing allyl chloroformate, for photopolymn. of  
vinyl monomers)

IT 41424-21-9  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing benzenesulfonyl chloride, for photopolymn.  
of vinyl compds.)

IT 39358-56-0  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing benzenesulfonyl chloride, for photopolymn.  
of vinyl monomers)

IT 1271-28-9 1271-54-1 2937-50-0 12083-24-8 26078-96-6 39955-79-8  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing for photopolymn. of vinyl monomers)

IT 90-13-1 98-09-9 532-27-4 2937-50-0 39955-79-8  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, containing metallocenes, for polymerization of vinyl compds. by  
light)

IT 108-31-6, uses and miscellaneous  
RL: CAT (Catalyst use); USES (Uses)  
(catalysts, for photopolymn. of vinyl monomers)

IT 9003-53-6P 9003-77-4P 9011-14-7P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, catalyst for photochem.)

IT 100-42-5DP, Benzene, ethenyl-, polymer with aminoplast acrylates  
9003-53-6P 9003-77-4P 9011-14-7P 25086-89-9P 130190-69-1DP,  
2-Propenoic acid, 2-hydroxyethyl ester, polymer with aminoplasts acrylates  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, catalysts for photochem.)

IT 25086-89-9P 41184-34-3P 41184-36-5P  
RL: PREP (Preparation)  
(preparation of, photopolymn. catalysts for)

L16 ANSWER 81 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1972:154235 CAPLUS

DN 76:154235

ED Entered STN: 12 May 1984

TI Polymerization of methyl methacrylate by organometallic  
compounds. VI. Kinetics and mechanism of polymerization initiated  
photochemically by triethyl aluminum monomer complexes

AU Allen, P. E. M.; Bateup, B. O.; Casey, B. A.

CS Dep. Phys. Inorg. Chem., Univ. Adelaide, Adelaide, Australia

SO European Polymer Journal (1972), 8(3), 329-38

CODEN: EUPJAG; ISSN: 0014-3057

DT Journal

LA English

CC 35 (Synthetic High Polymers)  
 AB The kinetics indicated that the initial polymerization rate has a half-order with respect to triethylaluminum [97-93-8] and that initiation occurs by a bimol. reaction between a photo-excited 1:1 Me methacrylate [80-62-6]-Et<sub>3</sub>Al Wittig-ate complex and an unexcited complex mol.  
 ST kinetics methacrylate photopolymn; ethylaluminum polymn catalyst; aluminum ethyl polymn catalyst; Wittigate complex catalyst  
 IT Polymerization  
     (of methyl methacrylate, mechanism of photochem.)  
 IT Kinetics of polymerization  
     (of methyl methacrylate, photochem.)  
 IT Polymerization catalysts  
     (triethylaluminum, for methyl methacrylate, photo-)  
 IT 97-93-8, uses and miscellaneous  
 RL: CAT (Catalyst use); USES (Uses)  
     (catalysts, for photopolymn. of methyl methacrylate)  
 IT 80-62-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
     (polymerization of, catalysts for photochem.)

L16 ANSWER 82 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1972:127506 CAPLUS  
 DN 76:127506  
 ED Entered STN: 12 May 1984  
 TI Preparation of poly(vinyl chloride) at low temperature by a photochemical method  
 AU Manson, John A.; Iobst, Stanley A.; Acosta, Rodrigo  
 CS Dep. Chem., Lehigh Univ., Bethlehem, PA, USA  
 SO Journal of Polymer Science, Polymer Chemistry Edition (1972), 10(1), 179-86  
 CODEN: JPLCAT; ISSN: 0449-296X  
 DT Journal  
 LA English  
 CC 35 (Synthetic High Polymers)  
 AB Vinyl chloride was polymerized photochem. at low temps. by using a tungsten-iodine lamp and uranyl nitrate [10102-06-4] sensitizer. The use of predominantly visible light minimized the degradation sometimes encountered with uv light, and the poly(vinyl chloride) (I) [9002-86-2] product had fraction of racemic or syndiotactic diads and % crystallinity similar to I prepared in conventional organometallic systems. The fraction of racemic diads and % crystallinity were inversely proportional to the polymerization temperature Measurements of torsional modulus as a function of temperature were also made.  
 ST polymn photo vinyl chloride; PVC photopolymer  
 IT Polymerization  
     (by visible light, of chloroethylene at low temps.)  
 IT Crystallinity  
     Polymer morphology  
     Tacticity  
         (of chloroethylene polymers prepared photochemically at low temps.)  
 IT Polymerization catalysts  
     (uranyl nitrate, for chloroethylene at low temps.)  
 IT 10102-06-4  
 RL: CAT (Catalyst use); USES (Uses)  
     (catalysts, for photopolymn. of chloroethylene at low temps.)  
 IT 9002-86-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
     (photochem. preparation of, at low temps. with visible light)

L16 ANSWER 83 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1971:26664 CAPLUS  
 DN 74:26664  
 ED Entered STN: 12 May 1984



TI Stable photopolymerizable mixtures  
 IN Roos, Leo  
 PA du Pont de Nemours, E. I., and Co.  
 SO Ger. Offen., 21 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC G03C; G03F  
 CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1915571		19701029	DE 1969-1915571	19690327
	GB 1233595			GB	
	US 3547651		19701215	US	19680402
PRAI	US		19680402		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 1915571	IC	G03C; G03F
	IPCI	G03C; G03F
	IPCR	G03F0007-029 [I,A]; G03F0007-029 [I,C*]
US 3547651	IPCR	G03F0007-029 [I,A]; G03F0007-029 [I,C*]
	NCL	430/288.100; 430/285.100; 430/907.000; 430/913.000; 522/012.000; 522/020.000; 522/121.000

AB Photopolymerizable mixts. of good storage stability were obtained by adding organic Sn, Pb, or Ge compds., such as Bu<sub>3</sub>SnOAc, Ph<sub>3</sub>SnCl, Ph<sub>4</sub>Sn, Et<sub>3</sub>PbCl, Bu<sub>4</sub>Sn, or Bu<sub>4</sub>Ge, to mixts. of methacrylate polymer, unsatd. compound, i.e. HOCH<sub>2</sub>C(CH<sub>2</sub>O<sub>2</sub>CCH:CH<sub>2</sub>)<sub>3</sub> or (CH<sub>2</sub>:CHCO<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>CH<sub>2</sub>, and initiator. Thus, 90:10 CH<sub>2</sub>:CMe-CO<sub>2</sub>Me-CH<sub>2</sub>:CMeCO<sub>2</sub>H copolymer 40, CH<sub>2</sub>:CMeCO<sub>2</sub>(CH<sub>2</sub>CH<sub>2</sub>O)<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>O<sub>2</sub>CCMe:CH<sub>2</sub> 51, methylene blue 1.5, 5,5-dimethyl-1,3-cyclohexanedione 1.7, Bu<sub>3</sub>SnOAc 2, 15% carbon black in iso-PROH 10, poly(oxyethylene) lauryl ether 10 g, and diluted with CCl<sub>2</sub>:CHCl to 650 g were milled 16 hr and coated on a 0.18-mm poly(ethylene terephthalate) (I) film precoated with a copolymer from CH<sub>2</sub>:CCl<sub>2</sub>, CH<sub>2</sub>:CMeCO<sub>2</sub>Me, and itaconic acid. The coating was dried and overcoated with a 0.025-mm-thick I film at 94°. The material was exposed, the 0.025-mm thick I film removed, and the unexposed portion transferred to paper at 100°. An image rich in contrast remained on the carrier film.

ST photopolymerizable organometallics;  
 organometallics photopolymerizable; images  
 photopolymerizable organometallics; tin  
 organometallics photog; lead organometallics photog;  
 germanium organometallics photog

IT Photoduplication  
 (photopolymerizable compns., containing methacrylic polymers and organic metal compds.)

IT 595-90-4 818-08-6 1153-06-6  
 RL: USES (Uses)

(photopolymerizable compns. containing methacrylate polymers and, for photoduplication)

IT 56-36-0 78-00-2 595-89-1 639-58-7 900-95-8 1067-14-7 1067-42-1  
 1461-22-9 1461-25-2  
 RL: USES (Uses)

(photopolymerizable compns. containing methacrylic polymers and, for photoduplication)

IT 9011-14-7, uses and miscellaneous 25086-15-1, uses and miscellaneous  
 RL: USES (Uses)

(photopolymerizable compns. containing organic metal compds. and, for photoduplication)

L16 ANSWER 84 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1965:467793 CAPLUS  
 DN 63:67793

OREF 63:12463d-f  
 ED Entered STN: 22 Apr 2001  
 TI Use of photolytically induced surface reactions for the production of microcurrents  
 AU White, P.  
 SO Electronics Reliability Microminiaturization (1963), 24, 161-6  
 From: CZ 1965(17), Abstr. 1891.  
 DT Journal  
 LA English  
 CC 9 (Electric and Magnetic Phenomena)  
 AB Three methods are described: (1) A polymer insulating layer was produced by the influence of uv on the polymerization of butadiene (I) gas on metal surfaces. This layer can be utilized as a thin dielec. layer or as an acid-resistant mask for etching. The dependence of the film formation rate on time, pressure, and light intensity and the effects of O and H were investigated. By use of a I-He mixture with a total pressure of 1 atmospheric and I partial pressure of 2 mm., the polymerization process did not have to be conducted in vacuum. (2) Metal was vaporized in the form of metal or organic compound by CH free radicals produced by the photolytic decomposition of CH<sub>3</sub>I, CH<sub>3</sub>Br, or acetone vapor from vapor-deposited Sn or Pb layers. The dependence of the etching process on pressure and temperature was described.  
 If the Sn film previous to the etching was exposed to O gas, etching started at higher temps. and more intense light action, because oxide films inhibited the elimination of metal by free radicals. (3) By photolytic decomposition of organometallic compds. (tetramethylgermanium), a metal film was formed. The area in which this reaction could take place was controlled by the wavelength and light intensity. This can be limited to 0.0005 in.  
 IT Insulators, electric  
 (1,3-butadiene polymer films as, from photopolymerization, for microcircuits)  
 IT Light, ultraviolet  
 (decomposition by, in preparation of films of elec. insulators, metals or semiconductors for microcircuits)  
 IT Electric circuits  
 (elec. insulators, metals and semiconductors for, preparation by ultraviolet light)  
 IT 1333-74-0, Hydrogen  
 (1,3-butadiene polymerization by light in presence of)  
 IT 7440-59-7P, Helium 7782-44-7P, Oxygen  
 RL: PREP (Preparation)  
 (1,3-butadiene polymerization by light in presence of, in preparation of elec. insulating films for microcircuits)  
 IT 7440-31-5P, Tin  
 RL: PREP (Preparation)  
 (films of, for elec. microcircuits, ultraviolet light in preparation of)  
 IT 7439-92-1P, Lead  
 RL: PREP (Preparation)  
 (films of, for elec. microcircuits, ultraviolet-induced photolytic reactions in preparation of)  
 IT 39396-58-2P, Germanium alloys, aluminum-  
 RL: PREP (Preparation)  
 (films, preparation of, by photolytic decomposition of tetramethylgermane, for  
 elec. microcircuits)  
 IT 106-99-0P, 1,3-Butadiene  
 RL: PREP (Preparation)  
 (polymerization of, by light, in preparation of elec. insulating films for microcircuits, and effects of He, H and O thereon)  
 IT 865-52-1P, Germane, tetramethyl  
 RL: PREP (Preparation)  
 (ultraviolet-induced photolytic decomposition of, in preparation of Ge films for

microcircuits)

L16 ANSWER 85 OF 85 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1960:114685 CAPLUS

DN 54:114685

OREF 54:21850b-e

ED Entered STN: 22 Apr 2001

TI Photopolymerizable compositions

PA E. I. du Pont de Nemours & Co.

DT Patent

LA Unavailable

CC 31 (Synthetic Resins and Plastics)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 835849		19600525	GB 1958-9907	19580327

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
GB 835849	IPCR	C08F0291-00 [I,C*]; C08F0291-18 [I,A]; G03F0007-033 [I,A]; G03F0007-033 [I,C*]

AB The title compns. are prepared from: (1)  $\geq 40\%$  by weight of an alkali-soluble C-chain addition polymer having lateral oxy acid groups linked to

chain C atoms by way of C chains of 1-6 C atoms, or H<sub>2</sub>O-soluble salts thereof, the polymer and its salts of I being soluble 1% NH<sub>4</sub>OH up to  $\geq 5\%$  by weight at room temperature; (2)  $\geq 10\%$  by weight of 1 or more compatible addition polymerizable ethylenically unsatd. compound which b.  $\geq 100^\circ$  at atmospheric pressure and forms with the above C-chain polymers homogenous and transparent compns.; and (3) an addition-polymerization initiator which is activated by actinic light but is thermally inactive at  $\leq 85^\circ$ . Thus, a solution of 5 parts of a 94:6 vinyl acetate: Na 2-propenesulfonate copolymer, 1 part triethylene glycol dimethacrylate (containing 50 p.p.m. hydroquinone), and 0.05 part benzoin Me ether in 9 parts acetone was cast in the dark on glass plates to give clear, soft, and slightly tacky films of the above composition about 20 mils thick. The films were exposed through a line-process negative for 10 min. to the radiation from a 275-w. Hg-vapor sunlamp at a distance of 8 in. from the film. After processing and washing, a clear, hard, printable film was obtained with raised relief images of excellent sharpness and fidelity with good recess areas. The compns. are also suitable as binders for phosphors in television tubes, for producing ornamental effects, and for plastic articles of various types.

IT Light

(-sensitive materials, polymeric)

IT Phosphors

(binding materials for, photopolymerizable compns. as)

IT Binding materials

(for phosphors, photopolymerizable compns. as)

IT Catalysts

(in polymerization, of photosensitive compns.)

IT Polymers

(light-sensitive)

IT Polymerization

(photochem., compns. for)

IT Plastic materials and Resinous products

(photopolymerizable)

IT Printing

(plates for, photopolymerizable compns. for)

IT Olefins

(polymers of, photosensitive)

IT Triethylene glycol, methacrylate, polymer with vinyl acetate

(etc., for photosensitive compns.)

IT Methacrylic acid, ester, with triethylene glycol, polymer with vinyl acetate

(etc., for photosensitive polymers)  
 IT 2-Propene-1-sulfonic acid, sodium salt, polymer with vinyl acetate  
 (etc., photosensitive)  
 IT 9003-20-7, Vinyl acetate polymers  
 (photosensitive)  
 IT 3524-62-7, Acetophenone, 2-methoxy-2-phenyl-  
 (photosensitive vinyl acetate copolymers containing)  
 IT 100-42-5, Styrene  
 (polymerization of, catalyzed by VC14 and organometallic  
 compds.)

=> s indigotin

1074 INDIGOTIN  
 21 INDIGOTINS  
 L17 1082 INDIGOTIN  
 (INDIGOTIN OR INDIGOTINS)

=> s l17 and (photopolymer? or hologra?)

16985 PHOTOPOLYMER?  
 22213 PHOTOPOLYMN  
 329 PHOTOPOLYMNS  
 22302 PHOTOPOLYMN  
 (PHOTOPOLYMN OR PHOTOPOLYMNS)  
 1484 PHOTOPOLYMD  
 1141 PHOTOPOLYMG  
 32050 PHOTOPOLYMER?  
 (PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)  
 20572 HOLOGRA?  
 18118 HOLOG  
 14 HOLOGS  
 18119 HOLOG  
 (HOLOG OR HOLOGS)  
 23988 HOLOGRA?  
 (HOLOGRA? OR HOLOG)  
 L18 0 L17 AND (PHOTOPOLYMER? OR HOLOGRA?)

=> s indigo and (photopolymer? or hologra?)

7934 INDIGO  
 120 INDIGOS  
 20 INDIGOES  
 7970 INDIGO  
 (INDIGO OR INDIGOS OR INDIGOES)  
 16985 PHOTOPOLYMER?  
 22213 PHOTOPOLYMN  
 329 PHOTOPOLYMNS  
 22302 PHOTOPOLYMN  
 (PHOTOPOLYMN OR PHOTOPOLYMNS)  
 1484 PHOTOPOLYMD  
 1141 PHOTOPOLYMG  
 32050 PHOTOPOLYMER?  
 (PHOTOPOLYMER? OR PHOTOPOLYMN OR PHOTOPOLYMD OR PHOTOPOLYMG)  
 20572 HOLOGRA?  
 18118 HOLOG  
 14 HOLOGS  
 18119 HOLOG  
 (HOLOG OR HOLOGS)  
 23988 HOLOGRA?  
 (HOLOGRA? OR HOLOG)  
 L19 6 INDIGO AND (PHOTOPOLYMER? OR HOLOGRA?)

=> d all 1-6

DN 139:237690  
 ED Entered STN: 10 Sep 2003  
 TI Photopolymers and their use in compositions for color images and sensors  
 IN Lee, Suk-hyun; Lee, Chan-woo; Young, Ho-sung; Kim, Yong-bung  
 PA S. Korea  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C08F020-10  
 ICS G03F007-004; G03F007-038; G03F007-039  
 CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 Section cross-reference(s): 25, 37, 41, 47

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003252929	A	20030910	JP 2002-146002	20020521
	JP 3878882	B2	20070207		
	KR 2003070956	A	20030903	KR 2002-10430	20020227
PRAI	KR 2002-10430	A	20020227		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003252929	ICM	C08F020-10
	ICS	G03F007-004; G03F007-038; G03F007-039
	IPCI	C08F0020-10 [I,A]; C08F0020-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-038 [I,A]; G03F0007-039 [I,A]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C08F0020-00 [I,C*]; C08F0020-10 [I,A]; C08F0220-00 [I,C*]; C08F0220-18 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]
KR 2003070956	IPCI	C08F0220-18 [ICM,7]; C08F0220-00 [ICM,7,C*]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; C08F0020-00 [I,C*]; C08F0020-10 [I,A]; C08F0220-00 [I,C*]; C08F0220-18 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]

AB The polymers are synthesized by polymerization of monomers containing dye mol. precursors prepared by substituting  $\geq 2$  phenolic or aniline group-containing dye mols. [e.g., phenolphthalein, o-cresolpholphthalein, tetrabromophenolphthalein, rosolic acid, N,N'-bis(salicylidene)-1,2-phenylenediamine, glyoxalb(2-hydroxyanil), 2,2-dihydroxyazobenzene, N,N'-bis(2-hydroxy- $\alpha$ -phenylbenzylidene)-ethylenediamine, dichlorofluorescein, indigo, lactone-containing compound] with acid reaction-decomposable groups (e.g., tert-butyloxycarbonyl, tetrahydropyran, acetyl) and radical-polymerizable groups (e.g., methacrylate ester). The polymers are suitable for photolithog., sensors, displays, food packagings utilizing pH-dependent color variation, etc.

ST photopolymer dye mol monomer color image sensor

IT Photoimaging materials

(color; dye mol.-derived photopolymers and their use in compns. for color images and sensors)

IT Photolithography  
Sensors

(dye mol.-derived photopolymers and their use in compns. for color images and sensors)

IT 80-62-6DP, Methyl methacrylate, polymers with dye mol.-derived monomers  
 591734-05-3DP, polymers with dye mol.-derived monomers and Me methacrylate  
 591734-06-4DP, polymers with dye mol.-derived monomers and Me methacrylate  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dye mol.-derived photopolymers and their use in compns. for color images and sensors)

IT 75-36-5, Acetyl chloride 76-62-0, Tetrabromophenolphthalein 77-09-8,

Phenolphthalein 482-89-3, Indigo 596-27-0 633-00-1,  
Rosolic acid 920-46-7, Methacryloyl chloride 1149-16-2,  
Glyoxalbis(2-hydroxyanil) 2050-14-8, 2,2'-Dihydroxyazobenzene  
2320-96-9, Dichlorofluorescein 3946-91-6 24424-99-5, Di-tert-butyl  
dicarbonate 65940-45-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(dye mol.-derived photopolymers and their use in compns. for  
color images and sensors)

IT 57840-38-7, Triphenylsulfonium hexafluoroantimonate

RL: CAT (Catalyst use); USES (Uses)

(photoacid generator, photopolymer composition containing; dye  
mol.-derived photopolymers and their use in compns. for color  
images and sensors)

L19 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:267422 CAPLUS

DN 130:353122

ED Entered STN: 30 Apr 1999

TI Photopolymerizable compositions with high sensitivity in visible  
to near IR region even in the presence of oxygen

IN Kimura, Yoshio; Hagiwara, Toshio

PA Tokuyama Sekiyu Kagaku K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08F002-50

ICS C08F004-00; G03F007-027; C08F020-10; C08F290-00; C09D004-00;  
C09D005-00; C09J004-00

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 41, 42, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11116611	A	19990427	JP 1997-294894	19971013
PRAI	JP 1997-294894		19971013		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11116611	ICM	C08F002-50
	ICS	C08F004-00; G03F007-027; C08F020-10; C08F290-00; C09D004-00; C09D005-00; C09J004-00
	IPCI	C08F0002-50 [ICM,6]; C08F0004-00 [ICS,6]; G03F0007-027 [ICS,6]; C08F0020-10 [ICS,6]; C08F0290-00 [ICS,6]; C09D0004-00 [ICS,6]; C09D0005-00 [ICS,6]; C09J0004-00 [ICS,6]
	IPCR	C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0004-00 [I,A]; C08F0004-00 [I,C*]; C08F0020-00 [N,C*]; C08F0020-10 [N,A]; C08F0290-00 [N,A]; C08F0290-00 [N,C*]; C09D0004-00 [N,A]; C09D0004-00 [N,C*]; C09D0005-00 [N,A]; C09D0005-00 [N,C*]; C09J0004-00 [N,A]; C09J0004-00 [N,C*]; G03F0007-027 [I,A]; G03F0007-027 [I,C*]

AB Title compns. useful for coatings, inks, photoresists, etc., comprise (A)  
monomers or oligomers which contain  $\geq 1$  ethylenically unsatd. bonds,  
(B) cationic organic colorants which absorb visible or near IR lights, (C)  
organic B compds., (D) photoacid generators, (E) and  $\geq 1$  organic pigments  
selected from azos, anthraquinones, isoindolinones, indigos,  
quinacridones, dioxazines, phthalones, perylenes, methines, and  
azomethines. Thus, a mixture of SP 1529X (epoxy oligomer) 50,  
trimethylolpropane triacrylate 50, tetrahydrofurfuryl acrylate 5,  
isobornyl acrylate 5, 2-hydroxy-1-acryloxy-3-methacryloxypropane 2,  
1,2-naphthoquinone-2-diazide-4-sulfonyl chloride 0.13, N(Bu)<sub>4</sub>.B(Bu)(Ph)<sub>3</sub>  
0.4, 1,1,5,5-tetrakis-(4-diethylaminophenyl)pentadienylium  
p-toluenesulfonate 0.1, and Pigment Violet-23 0.004 part was applied on a

steel plate and irradiated with a halogen lamp to give a coating with tack-free time 150 s.

ST photopolymerizable compn ethylenical unsatd monomer oligomer;  
 visible light absorption photopolymerizable compn; near IR  
 absorption photopolymerizable compn; cationic org colorant  
 photopolymerizable compn; organoboron compd  
 photopolymerizable compn; photoacid generator  
 photopolymerizable compn; azo org pigment  
 photopolymerizable compn; anthraquinone org pigment  
 photopolymerizable compn; isoindolinone org pigment  
 photopolymerizable compn; indigo org pigment  
 photopolymerizable compn; quinacridone org pigment  
 photopolymerizable compn; dioxazine org pigment  
 photopolymerizable compn; phthalone org pigment  
 photopolymerizable compn; perylene org pigment  
 photopolymerizable compn; methine org pigment  
 photopolymerizable compn; azomethine org pigment  
 photopolymerizable compn

IT Pigments, nonbiological  
 (anthraquinone; photopolymerizable compns. with high  
 sensitivity in visible to near IR region even in the presence of  
 oxygen)

IT Pigments, nonbiological  
 (azo; photopolymerizable compns. with high sensitivity in  
 visible to near IR region even in the presence of oxygen)

IT Coloring materials  
 (cationic, organic; photopolymerizable compns. with high  
 sensitivity in visible to near IR region even in the presence of  
 oxygen)

IT Coating materials  
 Inks  
 (photocurable; photopolymerizable compns. with high  
 sensitivity in visible to near IR region even in the presence of  
 oxygen)

IT Photoresists  
 (photopolymerizable compns. with high sensitivity in visible  
 to near IR region even in the presence of oxygen)

IT 96233-24-8  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (cationic colorant; photopolymerizable compns. with high  
 sensitivity in visible to near IR region even in the presence of  
 oxygen)

IT 36451-09-9, 1,2-Naphthoquinone-2-diazide-4-sulfonyl chloride  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (photoacid generator; photopolymerizable compns. with high  
 sensitivity in visible to near IR region even in the presence of  
 oxygen)

IT 224045-71-0P, 2-Hydroxy-1-acryloxy-3-methacryloxypropane-isobornyl  
 acrylate-Ripoxy SP 1529X-tetrahydrofurfuryl acrylate-trimethylolpropane  
 triacrylate copolymer 224636-92-4P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (photopolymerizable compns. with high sensitivity in visible  
 to near IR region even in the presence of oxygen)

IT 81-77-6 3089-17-6, Pigment Red 202 14295-43-3, Pigment Red 88  
 17741-63-8, Pigment Violet 37 120307-06-4, Tetrabutylammonium  
 butyltriphenylborate 215247-95-3, Pigment Violet 23  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (photopolymerizable compns. with high sensitivity in visible  
 to near IR region even in the presence of oxygen)

TI Photopolymerizable composition  
 IN Nemcek, Josef; Heap, Nicholas  
 PA Imperial Chemical Industries Ltd., UK  
 SO Ger. Offen., 31 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 IC C08K  
 CC 42-10 (Coatings, Inks, and Related Products)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2454800	A1	19750528	DE 1974-2454800	19741119
	DE 2454800	C2	19860109		
	JP 50084683	A	19750708	JP 1974-132608	19741118
	JP 59001282	B	19840111		
	SE 7414517	A	19750520	SE 1974-14517	19741119
	DK 7406009	A	19750721	DK 1974-6009	19741119
	DK 152437	B	19880229		
	DK 152437	C	19880725		
	ZA 7407402	A	19760728	ZA 1974-7402	19741119
	US 3974053	A	19760810	US 1974-525275	19741119
	CA 1058796	A1	19790717	CA 1974-214043	19741119
	AU 7475556	A	19760520	AU 1974-75556	19741120
	FR 2257641	A1	19750808	FR 1974-39206	19741129
	FR 2257641	B1	19790706		
PRAI	GB 1973-53581	A	19731119		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2454800	IC	C08K
	IPCI	C08K0005-07; C08K0005-17; C08K0005-00 [C*]
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
JP 50084683	IPCI	C08F0002-50; C08F0002-46 [C*]; G03C0001-68 [ICA]
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
SE 7414517	IPCI	C08F0002-46
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
DK 7406009	IPCI	C08F
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
ZA 7407402	IPCI	C07C
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
US 3974053	IPCI	C08F0008-00; C08F0002-46
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
	NCL	526/260.000; 522/011.000; 522/018.000; 522/167.000; 522/177.000; 522/182.000; 522/183.000; 525/020.000; 525/021.000; 525/026.000; 525/046.000; 526/312.000; 526/321.000; 526/328.500; 526/329.700; 526/330.000; 526/341.000; 526/346.000
CA 1058796	IPCI	C08F0004-40; C08F0004-00 [C*]; C08F0120-00; C08F0283-00
	IPCR	C08F0002-00 [I,C*]; C08F0002-00 [I,A]; C08F0002-46 [I,C*]; C08F0002-50 [I,A]; C08F0299-00 [I,C*]; C08F0299-04 [I,A]
AU 7475556	IPCI	C08F0001-16; C08F0001-20



IPCR C08F0002-00 [I,C\*]; C08F0002-00 [I,A]; C08F0002-46  
[I,C\*]; C08F0002-50 [I,A]; C08F0299-00 [I,C\*];  
C08F0299-04 [I,A]

FR 2257641 IPCI C08K0005-34; C08K0005-00 [C\*]; C08F0002-50; C08F0002-46  
[C\*]

IPCR C08F0002-00 [I,C\*]; C08F0002-00 [I,A]; C08F0002-46  
[I,C\*]; C08F0002-50 [I,A]; C08F0299-00 [I,C\*];  
C08F0299-04 [I,A]

AB Photopolymerizable and -crosslinkable compns. especially suitable as  
coating materials were prepared from (a) dimethylaminoethyl methacrylate (I)  
[2867-47-2], (b) Crystic 199 (II) [37342-20-4] or hydroxyethyl  
methacrylate [868-77-9], and (c) N,N'-oxalyindigo (III) [2533-00-8] its  
tetrachloro derivative, or 2,3-dibenzoyl-2-norbornene [56585-39-8] or its  
dibromo derivs. Thus, a mixture of III 0.01, I 4, styrene 38, and II 62  
parts was irradiated (7.6 cm distance) at room temperature with a 20-W blue  
light fluorescent tube and gelled in 2.25 min. The gelation period could  
be varied with the amount of III and no gelation occurred without I.

ST photopolymn dimethylaminoethyl methacrylate; coating  
photopolymn; oxalyindigo photosensitizer; benzoylnorbornene  
photosensitizer; indigo oxalyl sensitizer; norbornene dibenzoyl  
sensitizer; polymn photochem coating

IT Crosslinking catalysts  
Polymerization catalysts  
(oxalyindigo derivative or dibenzoylnorbornene derivs., for coatings by  
light)

IT Crosslinking  
Polymerization  
(photochem., of dimethylaminoethyl methacrylate coating compns.)

IT Coating materials  
(photosetting, dimethylaminoethyl methacrylate containing vinyl compds. and  
photosensitizers)

IT 868-77-9 26249-22-9  
RL: USES (Uses)  
(coating compns., containing dimethylaminoethyl methacrylate and  
photosensitizers)

IT 2867-47-2  
RL: USES (Uses)  
(coating compns., containing vinyl compds. and photosensitizers)

IT 2533-00-8 56581-22-7 56585-39-8 56602-42-7  
RL: USES (Uses)  
(sensitizers, for photochem. crosslinking of coatings)

L19 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1972:20052 CAPLUS

DN 76:20052

ED Entered STN: 12 May 1984

TI Pigmented photoresists

IN Hepher, Martin; Sperry, John A.

PA Norprint Ltd., Autotype Division

SO Ger. Offen., 17 pp.  
CODEN: GWXXBX

DT Patent

LA German

IC G03C

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2109200	A	19710916	DE 1971-2109200	19710226
	DE 2109200	B2	19760415		
	DE 2109200	C3	19761202		
	GB 1307995	A	19730221	GB 1970-10884	19700306
	US 3726677	A	19730410	US 1971-117138	19710219
	NL 7102756	A	19710908	NL 1971-2756	19710302
	FR 2084151	A5	19711217	FR 1971-7357	19710303

JP 51015732	B	19760519	JP 1971-11544	19710304
BE 763836	A1	19710802	BE 1971-100541	19710305
PRAI GB 1970-10884	A	19700306		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2109200	IC	G03C
	IPCI	G03C0001-68
	IPCR	G03F0007-031 [I,C*]; G03F0007-031 [I,A]
GB 1307995	IPCI	G03C0001-68
US 3726677	IPCI	G03C0001-68; G03C0001-70
	NCL	430/281.100; 430/308.000; 430/310.000; 430/339.000; 430/915.000; 430/926.000; 522/050.000; 522/059.000; 522/063.000; 522/087.000; 522/117.000
NL 7102756	IPCI	G03C0001-68
	IPCR	G03F0007-031 [I,C*]; G03F0007-031 [I,A]
FR 2084151	IPCI	G03F0007-00; G03C0001-00
	IPCR	G03F0007-031 [I,C*]; G03F0007-031 [I,A]
JP 51015732	IPCI	G03C0001-68; G03F0007-02; C08F0002-46
BE 763836	IPCI	G03C

AB Pigmented photoresists useful for protective coatings or master plates were made from N,N'-methylenebis(acrylamide) (I) or its mixture with acrylamide dispersed in gelatin or poly(vinyl alc.) by photopolymerization in the presence of solubilized indigoid vat dye catalyst and coloring before or after photopolymerization. Thus, a mixture consisting of 15% gelatin solution containing Irgalite blue GLS 20, acrylamide 2.0, I 2.0, Anthrasol orange HR catalyst 0.2, and diethylene glycol 0.5 g was coated on a polyester support, dried, exposed 90 sec through a photog. pos. to light of a 125-W Phillips lamp, and developed by washing out the nonimage areas with water of 40° to give a pigmented neg. image.

ST acrylamide gelatin color photoresist; polyvinyl alc acrylamide photoresist; indigo dye catalyst photopolymerization

IT Dyes

(indigoid, as photocatalysts for acrylamide derivs. for resists)

IT Polymerization catalysts

(photo-, indigoid dyes as, for acrylamide derivs. for photoresists)

IT Resists

(photo-, photopolymerizable compns. containing methylenebis(acrylamide) for pigmented, indigoid dye photocatalysts for)

IT 79-06-1, uses and miscellaneous

RL: USES (Uses)

(photopolymerizable compns. containing methylenebis(acrylamide) and, for photoresists)

IT 110-26-9 4887-13-2 7150-41-6

RL: USES (Uses)

(photopolymerizable compns. containing, for photoresists)

L19 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1970:430705 CAPLUS

DN 73:30705

ED Entered STN: 12 May 1984

TI Sheets of photopolymerizable material containing indigo dyes

PA Badische Anilin- & Soda-Fabrik AG

SO Fr., 8 pp.

CODEN: FRXXAK

DT Patent

LA French

IC C08G; G03C

CC 74 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 1581899		19690919	FR	19680920

DE 1669723  
GB 1231638  
US 3637382

DE  
GB  
US  
19720125  
19670922

19680920

PRAI DE

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
FR 1581899	IC	C08G; G03C
	IPCI	C08G; G03C
	IPCR	G03F0007-09 [I,C*]; G03F0007-105 [I,A]
US 3637382	IPCR	G03F0007-09 [I,C*]; G03F0007-105 [I,A]
	NCL	430/281.100; 430/288.100; 430/290.000; 430/292.000; 430/302.000; 430/306.000; 430/915.000; 430/926.000; 522/016.000; 522/050.000; 522/063.000; 522/137.000

AB Indigo dyes are incorporated into sheets of photopolymerizable polyamides to give a visual indication of the retention of an image, on exposure to light through a negative, by loss of color. The process is used in the manufacture of printing plates. Thus, 0.001-0.1 wt % Na 5,5'-indigodisulfonate was mixed with a solution of a copolyamide prepared from hexanolactam, hexamethylenediammonium adipate, dicyclohexylmethane-4,4'-diammonium adipate, N,N'-diacryloyl-m-xylylenediamine, triethylene glycol bisacrylamide, ethylene glycol bis(acrylamidomethyl) ether, CH<sub>2</sub>:CMeCONHCH<sub>2</sub>OMe, PhCH(OMe)COPh, and the cyclohexylammonium salt of N-nitrosocyclohexylamine, in aqueous MeOH. Sheets were formed by evaporation of the solvent and pressing, and exposed to light through a negative to give an image by decoloration in 3 min. The plates formed were not adversely affected by 6 months storage at 40°.

ST indigo dyes photopolymn polyamides; dyes  
indigo photopolymn polyamides; photopolymn  
polyamides indigo dyes; polyamides photopolymn  
indigo dyes; image visualization indigo dyes; printing  
plates photopolymn polyamides

IT Printing

(plates, photopolymerizable polyamide sheets containing  
bleachable indigo dyes for visible image formation for)

IT 84-40-2 482-89-3 522-75-8 860-22-0 2475-31-2 6275-44-1  
6371-38-6 29245-44-1

RL: USES (Uses)

(photopolymerizable polyamide sheets containing, for visible  
image formation)

L19 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1953:31821 CAPLUS

DN 47:31821

OREF 47:5385h-i,5386a-e

ED Entered STN: 22 Apr 2001

TI Polymerization. II. The photopolymerization of  
9-methylenefluorene

AU Schlubach, Hans Heinrich; Faltings, Almuth

CS Univ., Hamburg

SO Chemische Berichte (1952), 85, 514-20

CODEN: CHBEAM; ISSN: 0009-2940

DT Journal

LA Unavailable

CC 10 (Organic Chemistry)

GI For diagram(s), see printed CA Issue.

AB cf. C.A. 44, 8333f. Whereas the photochem. polymerization velocity of styrene (I) at 27° is considerably slower than the thermal polymerization at 100°, that of 9-methylenefluorene (II) at 27° is about 50 times as fast as the thermal polymerization at 100° (cf. Wieland, et al., C.A. 17, 754; S., et al., loc. cit.). This difference is further investigated. II, in a solid state under complete exclusion of O and in the dark, is converted into a product almost insol. in all organic solvents, indicating that no photopolymerization is involved. The behavior of II in solution is

not clear. II, prepared according to W., always contains some halogen which, like O, favors the photopolymerization. Expts. are carried out to exclude these factors. 9-Chloro-9-methylfluorene is refluxed 4 hrs. with 3 times its weight of absolute C<sub>5</sub>H<sub>5</sub>N in a N atmospheric, the mixture poured into iced H<sub>2</sub>SO<sub>4</sub> in a CO<sub>2</sub> atmospheric; extracted with petr. ether, and the

dried petr. ether solution evaporated in vacuo, giving II, m. 53°, and free of halogen. II (1 mol.) in 10 moles C<sub>6</sub>H<sub>6</sub> is irradiated in a specially designed apparatus with a Hg high-pressure burner of an Osram mixed-light lamp Type H Q A 500 at 9 cm. distance in a thermostat at 20° 1-10 hrs. with exclusion of O; the addition of 20 mols. MeOH ppts. about 1% of a polymerization product, and concentration of the filtered solution and

addition of MeOH give a dimeric II (III), m. 187°, mol. weight 340, which, on hydrogenation in AcOH 2 hrs. at 20° with Adams PtO<sub>2</sub> catalyst, takes up 0.88 mol. H and gives the saturated hydrocarbon, m. 169°, which may be identical with W.'s "1,3-dibiphenylenebutane" (cf. C.A. 32, 137.2). II, therefore, does not polymerize on irradiation when O and halogen are absent but dimerizes. II, irradiated in the presence of halogen, gives up to 12% polymers. When O is passed into a solution of II in C<sub>6</sub>H<sub>6</sub> or PhMe with irradiation 2 hrs. at 20° and MeOH is added, 9-methylenefluorene peroxide (IV), m. 153°, is precipitated IV decolorizes indigo and liberates iodine from KI; it rapidly decompose Freshly prepared IV catalyzes the polymerization of II. The peroxides present in ether also accelerate the photopolymerization, whereas the addition of Bz<sub>2</sub>O<sub>2</sub> has no effect. The peculiar behavior of II is caused by the fact that it very readily forms an active peroxide (V). Addition of 1.5 mol.-% II to I and irradiation of the solution at 20° cause an initial acceleration of the polymerization, but after II has dimerized it stops the polymerization of I. V does not accelerate the polymerization of I even in the presence of O.

IT Polymerization

IT Reaction kinetics and(or) velocity

(of polymerization, of 9-methylenefluorene and of styrene)

IT Fluorene, 9-methylene-, peroxide

RL: PREP (Preparation)

IT Fluorene, 9-methylene-, dimer

(and photopolymerization of)

IT 4425-82-5, Fluorene, 9-methylene-

(and photopolymerization of)

IT 60930-50-9P, Methane, 9-fluorenyl(9-methyl-9-fluorenyl)- 103623-02-5P,

Methane, 9-fluorenylidene(9-methyl-9-fluorenyl)-

RL: PREP (Preparation)

(preparation of)

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(FILE 'HOME' ENTERED AT 11:23:49 ON 11 JUN 2007)

FILE 'CAPLUS' ENTERED AT 11:24:01 ON 11 JUN 2007

L1 1 S US 2005-0233246/PN

FILE 'REGISTRY' ENTERED AT 11:24:30 ON 11 JUN 2007

FILE 'CAPLUS' ENTERED AT 11:24:38 ON 11 JUN 2007

L2 TRA L1 1- RN : 18 TERMS

FILE 'REGISTRY' ENTERED AT 11:24:38 ON 11 JUN 2007

L3 18 SEA L2

L4 1 S (INDIGO OR SUDAN OR NICKEL) AND L3

L5 0 S (INDIGO OR SUDAN OR QUINOLINE) AND L3

L6 3 S INDICO

L7 634 S INDIGO

L8 151 S INDIGOTIN OR (SUDAN(3W)I) OR DIETHYLEAMINOPHENYLIMINO(5A)QUIN  
 L9 152 S INDIGOTIN OR (SUDAN(3W)I) OR DIETHYLAMINOPHENYLIMINO(5A)QUINO  
 L10 2 S (SUDAN(3W)I) OR DIETHYLAMINOPHENYLIMINO(5A)QUINOLINE  
 L11 150 S INDIGOTIN

FILE 'CAPLUS' ENTERED AT 11:28:25 ON 11 JUN 2007

L12 4 S L10 AND (PHOTOPOLYMER? OR HOLOGRA?)  
 L13 241 S ("SUDAN I" OR DIETHYLAMINOPHENYLIMINO(5A)QUINOLINE)  
 L14 52383 S ("SUDAN I" OR QUINOLINE)  
 L15 47989 S ("SUDAN I" OR ORGANOMETALLIC)  
 L16 85 S L15 AND (PHOTOPOLYMER? OR HOLOGRA?)  
 L17 1082 S INDIGOTIN  
 L18 0 S L17 AND (PHOTOPOLYMER? OR HOLOGRA?)  
 L19 6 S INDIGO AND (PHOTOPOLYMER? OR HOLOGRA?)

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COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
345.11	480.37

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-74.10	-74.10

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STN INTERNATIONAL LOGOFF AT 11:32:59 ON 11 JUN 2007